

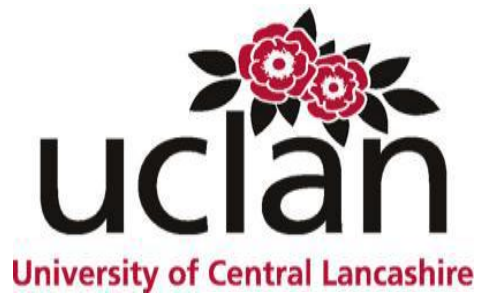
Perspectives on Destination Crisis Management in the UK and Mexico: Conventional Crisis Models and Complexity Theory

by

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at the University of Central Lancashire**

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Abstract

The tourism industry is particularly vulnerable to crises and disasters. Indeed, many commentators agree that it is only a matter of time before destinations encounter significant disruption of some form or other, which can have a devastating effect on stakeholders. Consequently, a number of tourism specific crisis management models and frameworks have been developed to provide assistance to managers so that they can be prepared and organised when affected by such an occurrence. However, these models can be criticised for displaying a number of limitations which, ultimately, diminishes their usefulness. In particular, drawing on organisational crisis management theory as a framework, they fail to account for differences in size and scope between a typical business organisation and a tourism destination. At the same time, the prescriptive, linear, one-size-fits-all structure of the models does not consider the unpredictable, unique nature of crises and disasters, the manner in which they evolve and the distinct characteristics of individual tourism destinations. Furthermore, they presume coordination will automatically occur when, in reality, competition and rivalry often act as a barrier to the implementation of measures to achieve such aims.

Beyond these specific limitations, perhaps the most pertinent challenge to contemporary models is that the tourism system more generally cannot be considered, as has been the case since the inception of tourism as an academic subject, to be a predictable, rational entity. Rather, it is erratic and unpredictable and, thus, requires management strategies which not only recognise the chaotic nature of the system and its environment, but also offer a means of dealing with random change as and when it occurs. Consequently, commentators have suggested a chaos and complexity theory approach to tourism crisis management. In this way, the tourism system is viewed as a complex adaptive system, similar to an ecological community, which, despite its chaotic exterior, demonstrates an underlying current of orderliness and a particular aptitude for self-organisation. The ability of a system, under the correct conditions, to self-organise and evolve to an improved state of being has implications for the management of crises and disasters. Nevertheless, despite prompts from academia to investigate further, research has been extremely sparse and the potential of chaos and complexity theory as a method to manage tourism crises has remained relatively unknown.

This thesis, therefore, seeks to address the gap in the literature. Its overall purpose is to identify whether the proposed limitations of existing frameworks are demonstrated in practice and to consider whether a complexity-based perspective on tourism crisis and

disaster management represents a more viable framework for managers of tourism destinations preparing for and responding to crises. To address this purpose, two case studies are conducted in the context of two tourism crises, namely the 2001 UK Foot and mouth crisis and the 2009 Mexican H1N1 Influenza crisis. Following an interpretivist theoretical approach to the research, a series of semi-structured interviews were conducted with relevant participants associated with each crisis and the information gathered was analysed along with media and government documentary evidence pertaining to each crisis.

The research serves to substantiate the claim that the proposed limitations diminish the effectiveness of contemporary tourism crisis and disaster models, as the limitations are clearly evident in both case studies. Moreover, the case studies also offer the opportunity to observe manifestations of the elements of chaos and complexity, which enables the conclusion to be drawn that had the Foot and Mouth crisis and the H1N1 Influenza crisis been managed using complexity theory based management strategies, facilitated by the implementation of a 'learning destination' type structure, then the crisis response would have been improved. The research has profound implications for tourism crisis and disaster management. That is to say, although the uniqueness of each crisis situation is a fundamental concept throughout this research, the fact that the limitations were evident and that elements of complexity theory were apparent in both these crisis situations suggests that this research could be applicable on a much broader scale.

Contents

Abstract.....	i
Contents.....	iii
List of tables and figures.....	viii
Acknowledgements.....	x

Chapter 1	1
Introduction.....	1
1.1: A framework to the research questions	1
1.2: Limitations of contemporary tourism crisis and disaster models	3
1.3: Complexity theory as an alternative approach	4
1.4: Aims and objectives.....	8
1.5: Research questions.....	8
1.6: Contribution of the Research.....	9
1.7: Overview of methodology	10
1.8: Thesis structure.....	10
1.9: Chapter summary.....	12
2.0: Introduction.....	14
2.1: Crisis and disaster definitions	14
2.2: The tourism industry – a propensity to crisis?	17
2.2.2: Types of tourism crises and disaster	20
2.2.3: Impacts	21
2.3: Risk perception.....	24
2.3.1: Risk types	24
2.3.2: Factors which shape risk perception	26
2.3.3: Categorisation of tourists according to risk perception.....	26
2.4: Tourism crisis and disaster management	28
2.4.1: Faulkner's framework	28
2.4.2: Faulkner's framework and its relation with crisis and disaster management theory.....	29
2.4.3: Applications and modifications of Faulkner's framework.....	35
2.4.4: Tourism crisis and disaster management models and frameworks.....	36
2.5: Limitations of contemporary tourism crisis and disaster management models..	37
2.5.1: The application of organisational crisis and disaster management theory to destination crisis management: the difficulty of implementing a collective strategy	38

2.5.2: The unpredictability of crises and disasters	40
2.5.3: The limitations of prescriptive models.....	43
2.5.4: One-size-fits-all approach.....	44
2.5.5: Lack of Coordination	48
2.6: Complexity and chaos theory.....	49
2.7: Summary	50
3.0: Introduction	52
3.1: Towards a chaos and complexity perspective for tourism crisis and disaster management.....	52
3.1.1: Systems theory	52
3.1.2: The tourism system.....	53
3.1.3: Dissatisfaction with the systems approach	54
3.2: An introduction to chaos and complexity theory and complex adaptive systems	55
3.2.1: Chaos theory.....	55
3.2.3: Complex adaptive systems.....	57
3.3: Properties of complex adaptive systems and features of chaos and complexity theory	57
3.4: Co-evolution, incorporating quasi-equilibrium (edge of chaos) and state change, non- linear changes and non-random future	58
3.4.1: Quasi-equilibrium or the edge of chaos	60
3.4.1.2: Tourism and the edge of chaos	61
Tourism destinations can also benefit from being positioned in the edge of chaos zone, as the process would serve to synchronise the destination's components and establish methods which would improve the overall competitiveness of the destination and its resilience to crisis and disaster. This will be discussed shortly, but first it is necessary to consider which tourism organisation should be responsible to implement such measures.	61
3.4.1.3: The Destination Management Organisation and the edge of chaos.....	61
3.4.1.4: Learning tourism destination	65
3.4.1.5: The learning tourism destination and tourism crisis and disaster management.....	67
3.4.2: State change and non-linear changes	71
3.4.2.1: The butterfly effect.....	71
3.4.2.2: Organisational management and the butterfly effect.....	72
3.4.2.3: Tourism and the butterfly effect	73
3.4.2.4: Tourism crisis management and the butterfly effect.....	73
3.4.3: Non-random futures	74
3.5: Internal mechanisms, incorporating agents, self-organisation and emergence, connectivity, dimensionality.....	74
3.5.1: Agents.....	75
3.5.2: Bifurcation	75
3.5.3: Cosmology	76
3.5.3.1: Tourism crisis and disaster management, bifurcation and cosmology	77

3.5.4: Self-organisation, emergence and strange attractors	78
3.5.4.1: Self-organisation and emergence in tourism.....	80
3.5.4.3: Self-organisation and emergence in a tourism destination.....	84
3.5.5: Connectivity	86
3.5.6: Dimensionality.....	87
3.6: Environment, incorporating dynamism, rugged landscape	87
3.6.1 Dynamism.....	88
3.6.2: Rugged landscape	89
3.7: Summary	90
Chapter 4.....	93
Methodology.....	93
4.0: Introduction.....	93
4.1: Paradigms.....	94
4.2: Revisiting the aims, objectives and research questions	96
4.2.1: Aims and objectives	96
4.2.2: Research questions.....	97
4.4: Methodological approach: Qualitative research	100
4.5: Research methods.....	102
4.5.1: Case studies	102
4.5.2: Case studies and complexity theory	103
4.5.3: Choice of case studies	107
4.6: Data collection	107
4.6.1: Semi-structured interviews	107
4.6.2: H1N1 Influenza crisis	109
4.6.2.1: Selection of interview respondents	109
4.6.2.3: Interview locations.....	112
4.6.2.4: Interview questions.....	113
4.6.3: FMD crisis	113
4.6.3.1: Selection of interview respondents	113
4.6.3.2: Interview preparation.....	114
4.6.3.3: Interview locations.....	115
4.6.3.3: Interview questions.....	115
4.7: Data analysis /interpretation	120
4.7.1: Coding.....	120
4.8: Documents	122
4.8.1: FMD Crisis	123
4.8.2: H1N1 Influenza crisis	124
4.8.3: Document analysis.....	125
4.9: Ethical considerations.....	126
4.10: Limitations of the methodology	126
Chapter 5.....	129

The Foot and Mouth disease tourism crisis	129
5.0: Introduction	129
5.1: Background to the FMD crisis	129
5.2: The national organisation for British tourism in the year 2001.....	133
5.3: The Foot and Mouth outbreak.....	133
5.3.1: Summary.....	142
5.4: Limitations of contemporary tourism crisis and disaster management models and frameworks.....	142
<i>Difficulty of implementing a collective strategy due to different perspectives:</i>	142
5.4.2: The unpredictability of crises and disasters	143
5.4.3: The limitations of prescriptive models.....	145
5.4.4: One size fits all approach	147
5.4.4.1: Size and scope of tourism crises and disasters	147
5.4.4.2: The contextual elements of a crisis or disaster	149
5.4.5: Lack of Coordination	153
5.5: Elements of complexity theory in the Foot and Mouth crisis	158
5.5.1: Edge of Chaos	158
5.5.4: Self- organisation, emergence and strange attractors	162
5.6: Restructuring the British tourism system of 2001	167
5.7: Summary	173
Chapter 6.....	174
The H1N1 Influenza tourism crisis in Mexico.....	174
6.0: Introduction.....	174
6.1: History of Mexican tourism	175
6.1.2: Mexican tourism 1846-1968	175
6.1.2: 1968- The State role and the export push	176
6.1.3: National Tourism Development Plans	177
6.1.4: Cancun success.....	178
6.1.5: Summary: the state of Mexican tourism in 2009	178
6.2: Mexican tourism administrative organisation	180
6.3: H1N1 Influenza tourism crisis	181
6.3.1: Initial government response	181
6.3.2: Impacts on the tourism industry.....	183
6.3.3: Response of SECTUR and the CPTM.....	186
6.3.4: Signs of recovery	187
6.3.5: Vive Mexico.....	188
6.3.6: Welcome Back: The North America campaign	188
6.3.7: Recovery.....	188
6.3.8: Crisis themes	189
6.3.9: Summary.....	191

6.4: Limitations of contemporary tourism crisis and disaster management models and frameworks.....	191
6.4.1: Organisational crisis and disaster management theory	191
<i>Difficulty of implementing a collective strategy due to different perspectives:</i>	<i>191</i>
6.4.2: The unpredictability of crises and disasters	192
6.4.3: The limitations of prescriptive models.....	194
6.4.3.1: Tourism crisis lifecycle	194
6.4.3.2: Crisis played out at different locations	195
6.4.4: A one-size-fits-all approach	196
6.4.4.1: Size and scope of tourism crises and disasters	196
6.4.4.2: The contextual elements of a crisis or disaster	197
6.5: Elements of complexity theory in the H1N1 Influenza Crisis	205
6.5.2: Butterfly effect	206
6.5.3: Bifurcation and cosmology	208
6.5.4: Self-organisation, strange attractors and emergence	209
6.5.5: Summary.....	211
6.6: Restructuring the Mexican tourism industry of 2009	212
6.7: Summary	216
Chapter 7	221
Conclusion.....	221
7.0: Introduction.....	221
7.1: Contextual background	222
7.2.1: Examine critically Faulkner's (2001) framework and also consider applications of the framework and other tourism crisis management models	223
7.2.2: Determine the issues which limit tourism crisis and disaster management frameworks; <i>also</i> explore the extent to which the proposed limitations of crisis management models and the elements of complexity theory have been manifested in practice, specifically during the FMD tourism crisis and the H1N1 Influenza tourism crisis.....	223
7.2.3: Consider the elements of chaos and complexity theory in relation to tourism crisis and disaster management; <i>also</i> explore the extent to which the proposed limitations of crisis management models and the elements of complexity theory have been manifested in practice, specifically during the FMD tourism crisis and the H1N1 Influenza tourism crisis.....	229
7.2.4: Establish whether complexity theory would have provided a viable framework for the management of the FMD tourism crisis and the H1N1 Influenza tourism crisis.	232
7.3: Learning tourism destination – a practical perspective	235
7.4: Future research	239
7.4.1: Issues related to the limitations of contemporary theory	239
7.4.2: Issues related to complexity theory based tourism crisis management....	240
7.4.3: Tourism Capitals	242
7.5: Contribution to knowledge	243
7.6: Final thoughts	244

List of tables and figures

Table 2.1: Longer- term positive and negative tourism impacts of the Katherine Flood	23
Figure 2.1: The tourism disaster management framework	30
Figure 3.1: The tourism system.....	54
Figure 3.2: Underlying dynamics of a complex adaptive system	58
Figure 3.3: Learning tourism destination framework.....	66
Figure 3.4: Knowledge Framework for Disaster Management in a Learning Destination	69
Figure 3.5: Conceptual Framework for Knowledge Based Crisis Management	71
Figure 3.6: The Fractal Web	82
Figure 3.7: Learning Area Process Model.....	85
Table 4.1: The ontology and epistemology of positivism and interpretivism	96
Table 4.2: Key concepts, terms, limitations and benefits of the research frameworks..	98
Table 4.3: Mason's five questions: How the researcher's ontological perspective and epistemological position relates to this research	101
Table 4.4: The case study: Limitations and justification	106
Table 4.5: Limitations of semi-structured interviews.....	108
Table 4.6: H1N1 Influenza crisis respondents.....	110
Table 4.7: FMD crisis respondents	114
Table 4.8: Objectives of the research questions	116-119
Table 4.9: <i>a priori</i> coding	121
Table 4.10: Documents: Limitations and justifications.....	123
Table 5.1 Agriculture versus tourism.....	140
Table 5.2: The drop in visitors from the long haul markets.....	141
Figure 5.1: Self-organisation in the British tourism.....	165
Table 5.3: FMD crisis incidents and complexity theory elements	166
Table 5.4: Edge of chaos assessment model.....	167
Table 5.5: How the tourism impacts from the FMD outbreak could have been modified if the British tourism industry had been functioning as a complex adaptive system on the edge of chaos: limitations of contemporary models.....	170-171
Table 5.6: How the tourism impacts from the FMD outbreak could have been modified if the British tourism industry had been functioning as a complex adaptive system on the edge of chaos: elements of complexity theory.....	172
Table 6.1: Top 10 international tourist destinations of 2008: arrivals and receipts...	179
Figure 6.1: 'Deadly swine flu outbreak sends wave of fear through Mexico City'	182
Figure 6.2: International tourist arrivals to Mexico, January to December, 2008 and 2009 (millions)	183

Table 6.2: Chronological impacts of the H1N1 outbreak on tourism	185
Table 6.3: Tourism crisis management plan (translated from the original Spanish version).....	187
Table 6.4: Cancun and Acapulco: similar initial impact, but different response	196
Table 6.5: H1N1 influenza crisis incidents and complexity theory elements	211
Table 6.6: How the impacts from the H1N1 Influenza crisis could have been modified if the Mexican tourism industry had been functioning as a complex adaptive system on the edge of chaos: limitations of contemporary models.....	213-214
Table 6.7: How the impacts from the H1N1 Influenza crisis could have been modified if the Mexican tourism industry had been functioning as a complex adaptive system: elements of complexity theory.....	215

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Chapter 1

Introduction

1.1: A framework to the research questions

Tourism is defined as ‘the processes, activities and outcomes arising from the relationships and interactions among tourists, tourism suppliers, host governments, host communities and surrounding environments that are involved in the attracting and hosting of visitors’ (Goeldner and Ritchie, 2003: 5,6). According to Ritchie (2009: 10), the ‘primary tourist product’ is comprised of transport, the travel trade, accommodation, catering and tourist attractions, while secondary and tertiary tourism businesses are found in the retail sector, the banking and insurance sector, the entertainment and leisure sector, the excursion and tours sector and the personal services sector. Globally, tourism is one of the fastest growing economic sectors (UNWTO, 2013) and, according to Glaesser (2006: 1), it is destined to become the ‘most significant industry in the world’.

In order to achieve and maintain success, a tourism destination must build upon its economic, social, cultural, political, technological and environmental strengths (Ritchie and Crouch, 2003). That is, a destination increases its competitiveness by having ‘the ability to increase tourism expenditure, to increasingly attract visitors while providing them with satisfying, memorable experiences, and to do so in a profitable way while enhancing the well-being of destination residents and preserving the natural capital of the destination for future destinations’ (Ritchie and Crouch, 2003: 2). Another key factor is the ability to provide a safe and secure environment for visitors (Volo, 2007), as tourists will not typically travel to a place they perceive as being a risk to their safety, security, health or general well-being.

However, maintaining a secure environment is problematic for any tourism destination, as ‘tourism is vulnerable to a wide range of threats from many different sources’ (de Sausmarez, 2004: 163). These threats include natural disasters, terrorism, economic disruption and political upheaval and, when a threat becomes reality, it can culminate in significant economic and social disruption for the destination concerned. Moreover, the situation is complicated further because the event which triggers a tourism crisis does not necessarily have to take place within the affected destination: ‘International tourism flows are subject to disruption by a range of events that may occur in the destination

itself, in competing destinations, origin markets, or they may be remote from either' Prideaux *et al.* (2003: 475). For instance, the 2001 terrorist attacks in the USA provoked a worldwide tourism crisis as people perceived travel as being dangerous.

While the tourism crisis is not a new phenomenon (Pforr and Hosie, 2007: 250), the continued spread of tourism, along with the increased interconnectivity of the world in general, has meant that 'shocks' of one form or another are now more common. That is, as an ever increasing number of places have become tourist destinations, thereby expanding the so-called 'pleasure periphery' (Turner and Ash, 1975) within a globalised world, it is perhaps inevitable that tourism crises have become a more common occurrence. Furthermore, the growth in twenty four-hour news coverage and social media has brought about a situation whereby virtually every incident is reported, serving to fuel the negative perceptions of affected destinations amongst potential tourists.

The increasing vulnerability of the tourism industry was noted by Faulkner (2001) over a decade ago. In his seminal paper on tourism crisis management, he suggested that 'Tourism destinations in every corner of the globe face the virtual certainty of experiencing a disaster of one form or another at some point in their history' (Faulkner, 2001: 135). He also argued that, at that time, there existed little systematic research into tourism disasters, their impacts and potential industry responses and, as a consequence, many destinations were unprepared when confronted with shock events. Therefore, drawing upon existing crisis management theory and disaster management strategies, he constructed a framework with which to analyse and develop future strategies for tourism disaster management.

In 2001, the same year that Faulkner's paper was published, two major events provoked tourism crises, namely, the Foot and Mouth Disease (FMD) outbreak in the UK, which had a devastating impact on that country's rural tourism sector, and the terrorist attacks in the USA which resulted in an overall decline in global tourist arrivals that year. These were followed by the Bali bombings in 2002, the SARS outbreak in 2003 and the Indian Ocean tsunami in 2004. Along with Faulkner's (2001) work, the scale and impact of these crises prompted a sudden and rapid increase in academic interest with respect to the management of such crises, with researchers either employing and augmenting Faulkner's (2001) framework or developing models and frameworks of their own (see Evans and Elphick, 2005; Hystad and Keller, 2008; Ritchie, 2004, 2009).

Nonetheless, there is still widespread concern that, despite the increasing academic attention paid to tourism crisis management over the last decade or so, many tourism

organisations and destinations continue to remain unprepared for a crisis situation (Ritchie, 2009). Indeed, Hystad and Keller (2008) suggest that both their research and also that of others (for example, Beirman, 2003; Faulkner and Vikulov, 2001; Glaesser, 2006) serves to reveal that the 'majority of tourism businesses do not actively incorporate disaster management strategies into their businesses' (Hystad and Keller, 2008: 160) which, in turn, serves to reflect 'the limited articulation between the tourism academy and tourism practitioners...' (Sharpley, 2011: 31). At the same time, however, it could also be an indication that both Faulkner's (2001) framework and other models and strategies proposed in recent years are, in fact, limited in the extent to which they provide practical solutions to the management of tourism crises and disasters.

1.2: Limitations of contemporary tourism crisis and disaster models

It is becoming more widely recognised that contemporary tourism crisis and disaster management models suffer a number of shortcomings which limit their use as a means of guiding destinations through a tourism crisis or disaster. The first weakness lies in the manner in which they borrow particular concepts from *business* crisis management theory, suggesting that there is a parallel between a business organisation and a tourism destination when, in reality, the two entities are very different. A business organisation is generally homogenous, whereas a tourism destination involves many competing agents involved in a myriad of complex relationships. Thus, directives which depend upon a collective strategy, acceptable in a business organisation, may be inappropriate in a destination where stakeholders often view the situation from different perspectives; some will be willing to follow a particular course of action whereas others will not.

The second limitation of many tourism crisis management models is that the *unpredictability* of tourism crises and disasters is not sufficiently taken into account. Contemporary models regard pre-crisis planning for conjectural crises and disasters in the form of risk assessment, scenario analysis and Delphi techniques as an essential requirement of crisis preparation. In reality, however, such exercises appear to be futile given the unpredictable nature of crises and disasters. Thirdly, the models tend to be rigid and overly prescriptive, presuming that each crisis or disaster passes through a number of linear phases, in essence following a lifecycle, thereby offering the opportunity to present a step-by-step guide to crisis management guide. Problems may emerge, however, when a crisis evolves in an erratic manner or does not follow an expected pattern, leaving managers confused and unsure of how to continue.

A fourth problem is that the models are unable to account for the fact that each and every crisis and disaster event is unique in nature, instead proposing a broad, generic

approach which does not reflect the reality of crisis and disaster situations. This 'one-size-fits-all' approach fails to consider the differences in size and scope of crises and disasters; that is to say, the application of an orthodox framework to a multitude of potential situations is not feasible. This is because complex crises and disasters require unique, sophisticated responses appropriate to particular sets of circumstances. Furthermore, a one-size-fits-all approach does not consider the contextual elements of a crisis or disaster. In other words, when a tourism crisis occurs, the context differs according to national culture, the destination culture, the structure of the destination and the relationship between the tourism sector and the government. For instance, crisis plans favour a proactive approach; however, many Asian countries prefer a reactive response (Pforr, 2006). Contextual elements are exclusive to each destination and they are changeable; therefore, a standard, universal plan will not be appropriate for all destinations. Fifth and finally, most tourism crisis management models are limited with respect to the issue of coordination. A pre-requisite of Faulkner's (2001) framework is the need for coordination, consultation and commitment; unfortunately, however, coordination problems are often apparent during tourism crises, thus severely compromising the response effort. In other words, it is assumed that the coordination efforts between stakeholders will fall into place without much difficulty but, in reality, this is rarely the case, with the structure of most destinations not facilitating the process of coordination.

These inherent weaknesses of contemporary tourism crisis and disaster management models and frameworks, such as Faulkner's (2001), may serve to limit their effectiveness in the face of potential or actual crises and disasters. Undoubtedly, in some circumstances they may offer an appropriate set of responses to a tourism crisis or disaster (see Faulkner and Vikulov, 2001). In other circumstances, however, particularly where a logical, step-by-step process is unable to encompass and account for the chaotic and complex nature of the occurrence, the extent to which they offer a realistic guide to managing the crisis is more limited (see Miller and Ritchie, 2003). Consequently, an approach is needed which recognises the chaotic and complex characteristics of crises and that suggests strategies to control and even to benefit from these characteristics. In short, the basis for understanding and developing responses to tourism crises and disasters may lie in the adoption of an approach which specifically caters for chaotic and complex systems, namely, complexity theory.

1.3: Complexity theory as an alternative approach

Since the days of the Industrial Revolution, the basis of organisation and management theory has revolved around Newtonian classical science, a reductionist approach which emphasises predictability and the ability to control events by a top-down management

approach. Borrowing heavily from organisational crisis theory, tourism crisis and disaster models and strategies also tend to follow this approach. However, several commentators question what they see as an out-dated method and propose an alternative conceptual foundation for the analysis and management of tourism (see Baggio, 2008; Farrell and Twining-Ward, 2003; Faulkner and Russell, 1997; McDonald, 2009; McKercher, 1999; Paraskevas, 2006; Ritchie, 2004; Russell and Faulkner, 1999; Speakman and Sharpley, 2012; Stevenson *et al.*, 2009; Zahra and Ryan, 2007). Known interchangeably as chaos theory or complexity theory, this alternative perspective rejects the view that systems can be understood in terms of predicable and linear relationships.

In the context of this thesis, therefore, chaos and complexity theory acknowledges the limitations of crisis management models referred to above, such as the unpredictable nature of crises and disasters and the step-by-step, generic plans, and mitigates them by suggesting that the tourism destination should be regarded as a dynamic, complex, unpredictable system which, essentially in the context of crises and disasters, is capable of adapting to change and emerging in a superior state than before. Complex adaptive systems contain a number of elements which can be identified throughout the various phases of a tourism crisis, allowing for moments of managerial intervention to confront the negative and enhance the positive aspects of these elements. That is, by being aware of the concepts relating to chaos and complexity theory and complex adaptive systems, governments, destination authorities and managers could potentially introduce measures designed to diminish the negative effects of chaotic situations and capitalise on the opportunities for improvement.

The elements that managers need to be aware of include:

Edge of chaos: This refers to the point at which a system is neither stable nor in chaos. While this may sound like the precursor to a system's demise, the 'edge of chaos' is actually a state of being that is to be desired, as the innovation, flexibility and adaptability nurtured here may ultimately serve to improve a system's competitiveness and resilience (McMillan and Carlisle, 2007). Hence, a tourism destination which functions on the edge of chaos develops a crisis culture which enhances its ability to cope with crises and disasters. Learning tourism destinations (see Schianetz *et al.*, 2007) facilitate the formation of partnerships and networks to nurture the characteristics related to an edge of chaos approach and it is, therefore, suggested that the first and most important step in improving tourism crisis management is the transformation of a destination into a learning destination. Once this has been achieved, knowledge pertaining to the management of crises and disasters can be developed and

subsequently stored in an information system to be distributed before, during and after a crisis or disaster (Mistilis and Sheldon, 2005; Racherla and Hu, 2009), with the Destination Management Organisation (DMO) playing a leading role in facilitating this movement across organisational boundaries (Blackman *et al.*, 2011).

Butterfly effect: Otherwise known as sensitive dependence on initial conditions, this concept emphasises the non-linearity of a complex adaptive system. Small and apparently trivial incidents can initiate a set of events which culminate in a crisis or disaster. Importantly, the process does not repeat itself, thus defying prediction, long-term strategic planning and the one-size-fits-all approach mentioned above. Managers can nurture positive butterfly effects and counter negative impacts in the same way by placing the destination into an edge of chaos zone resplendent with innovation, creativity and flexibility.

Bifurcation and Cosmology: Bifurcation occurs at the edge of chaos, often the result of a butterfly effect, and is the point at which the system will either transform itself to a higher level or will begin its demise. The emergency phase of tourism crises and disasters can be equated with this concept. For example, Russell and Faulkner (2004) liken the initial period following the United States and Bali terrorist attacks with the element of bifurcation. Bifurcation often results in cosmology, which refers to the panic and confusion present among the system's agents at this time, and which can result in hasty and inappropriate decision making. In fact, traditional crisis management strategy is unlikely to be effective in such a turbulent environment (Mason, 2007). Again, those organisations and destinations which have adopted a learning approach will be prepared for bifurcation and cosmology and, thus, be able to adapt to this situation.

Self-organisation, emergence and strange attractors: The likelihood of a system being able to emerge to a new order following bifurcation depends on its ability to self-organise and evolve: 'Through self-organization, new forms, structures, procedures, hierarchies, and understanding emerge, giving a new form to the system, often at a higher level of order and complexity' (Sellnow *et al.*, 2002: 272). The concepts of self-organisation and emergence help to explain why the tourism industry is generally able to self-organise rapidly following a crisis or disaster and evolve to a higher plane than previously existed, although one which is, nevertheless, unpredictable. Even when managed poorly, tourism destinations appear to have a natural ability to self-organise and emerge positively from a crisis situation. They evolve towards what is known as the strange attractor, an entity at times obvious but occasionally obscure. One example is the common sense of purpose which follows bifurcation as the destination's stakeholders attempt to rebuild the destination image. The destination self-organises in

a manner which 'defeats the common enemy – the 'crisis' – and allows the destination to recover. Methods put in place by managers to encourage this commitment, tenacity and self-organisation can also be referred to as strange attractors. In this way, learning destinations are specifically designed to foster self-organisation and its resultant emergence. That is, the values and culture of the destination and the management techniques used within its organisations are adapted to encourage the process of self-organisation among the system's agents, or the destination's stakeholders.

With this in mind, it may be appropriate for tourism managers to consider McMillan's Fractal Web (2002) and the Tourism Learning Area Process model presented by Moles-Moles (2003) and used by the European Commission (2006). McMillan's (2002) model emphasises the fractal properties of a complex adaptive system, while Moles-Mole's model (2003) offers a more technical approach. Essentially, however, both models display the working of a complex adaptive system and offer guidance to managers who are seeking to create the conditions necessary so that the destination is able to self-organise according to the demands of the particular crisis or disaster which has occurred.

Nevertheless, despite an expression of interest by several academics in the potential contribution offered by chaos and complexity theory to the effective management of tourism crises and disasters, little has actually been done in pursuing this line of inquiry. Paraskevas (2006) applies complexity theory to a case of food poisoning in a hotel chain while Speakman and Sharpley (2012) introduce a chaos theory approach to destination crisis management within the context of the 2009 H1N1 influenza crisis in Mexico. The latter conclude that the limitations of contemporary tourism crisis and disaster management models, as considered briefly above, were evident in the context of the Mexico tourism crisis: 'In particular, their generic, linear and prescriptive approach was appropriate to neither the unpredictability of the crisis, its rapid evolution, scale and impact, nor the political/cultural context within which it occurred'. Furthermore, Speakman and Sharpley (2012: 10) observe that 'the unfolding and consequences of the H1N1 Influenza outbreak reflected the tenets of chaos theory and, moreover, the responses of the Mexican tourism authorities largely mirrored the actions proposed in the alternative, chaos theory-based approach to crisis management'. However, while the actions of the Mexican tourism authorities in some respects reflected a complexity theory based approach, it was also clear that the Mexican tourism industry was not a 'learning tourism destination', and, subsequently, this served to diminish to some extent their response.

Speakman and Sharpley (2012) suggest further research to investigate the relevance of chaos theory to other tourism crises and disasters. This study responds to this proposal, and will further explore tourism crisis management based on chaos and complexity theory both in the context of the Mexican H1N1 Influenza crisis and also the UK Foot and Mouth outbreak of 2001.

1.4: Aims and objectives

The overall purpose of this research is to identify whether the proposed limitations associated with contemporary tourism crisis and disaster management are demonstrated in practice and to consider whether a complexity-based perspective on tourism crisis and disaster management represents a more viable framework for managers of tourism destinations preparing for and responding to crises.

More specifically, the objectives of this research are to:

- Examine critically Faulkner's (2001) framework and also consider applications of the framework and other tourism crisis management models;
- Determine the issues which limit tourism crisis and disaster management frameworks;
- Consider the elements of chaos and complexity theory in relation to tourism crisis and disaster management;
- Explore the extent to which the proposed limitations of crisis management models and the elements of complexity theory have been manifested in practice, specifically during the FMD tourism crisis and the H1N1 Influenza tourism crisis.
- Establish whether complexity theory would have provided a viable framework for the management of the FMD tourism crisis and the H1N1 Influenza tourism crisis.

1.5: Research questions

Three particular questions will guide this research:

- Were the proposed limitations associated with contemporary tourism crisis management models manifested during the FMD crisis in the UK and the H1N1 Influenza crisis in Mexico?
- Are elements of chaos and complexity theory present in the case studies?

- Do the case studies suggest that a complexity based perspective offers a more appropriate approach to destination crisis and disaster management?

1.6: Contribution of the Research

Since Faulkner (2001: 136) remarked that 'relatively little systematic research has been carried out on disaster phenomena in tourism' and consequently proposed his tourism disaster management framework, there has been an identifiable increase in related research, particularly with respect to the response and preparedness of the industry to crises and disasters (Hall, 2010). Faulkner's (2001) framework has been applied on several occasions while other commentators have presented their own crisis management models. Typically, these models, like Faulkner's, have borrowed from the organisational crisis management literature; they are linear, prescriptive and applicable to all situations. The problem with this approach, however, is that it fails to consider the complex and dynamic nature of tourism and, in certain situations, this could diminish the effectiveness of the models.

As a consequence, a number of commentators agree that chaos and complexity theory offers a suitable theoretical foundation for the study of tourism and crises (Baggio, 2008; Faulkner, 2001; Paraskevas, 2006; Ritchie, 2004, 2009; Scott *et al.*, 2007). Rather than being rigid and structured, it changes the scope of tourism crisis management by recognising the unpredictable, dynamic nature of tourism and the veiled order that lies within apparent chaos. However, despite the recommendations in the literature that research be conducted to assess the potential of chaos and complexity theory as a new approach for the management of crises, only Speakman and Sharpley (2012) have done so, applying a chaos theory perspective to the H1N1 Influenza crisis in Mexico. They also systematically considered the limitations of contemporary tourism crisis and disaster management models in the context of this same crisis.

This research will build upon that preliminary study to achieve a more comprehensive understanding of tourism destination crisis and disaster management. It will explore the events surrounding both the FMD crisis and the H1N1 Influenza crisis and consider whether the limitations of contemporary tourism crisis models are manifested in practice and if the elements of chaos and complexity theory can be recognised. It will also consider how the crisis response of each destination (the destinations respectively being Britain and Mexico as a whole, rather than specific resorts) might have been improved had the events been managed using a complexity theory based perspective.

1.7: Overview of methodology

It is necessary to adopt an ontological and epistemological perspective which is suitable to meet the aims and objectives of the research; that is, an approach which facilitates a holistic investigation regarding the limitations of contemporary tourism crisis models and the viability of a complexity theory based crisis management preparation and response. Hence, a perspective is required which enables an in-depth understanding of the tourism system and its environment and, in particular, the complex issues surrounding a tourism crisis or disaster. The positivist approach will not suffice as it is of a reductionist nature, thereby not suitable for a holistic inquiry; rather, an interpretivist theoretical perspective is adopted. The multitude of insights concerning the issues surrounding the tourism destination and the crisis paint a versatile, comprehensive, multidimensional picture of the situation and are captured through the process of qualitative research.

The qualitative research employed in this thesis takes the form of a collective case study (Blake, 2003), a term for a study which features two or more case studies. Case studies are used widely in tourism research (Beeton, 2005) and are particularly suitable for research in complexity theory as it facilitates the understanding of: interactions between the system's agents; the non-linearity of the system and how small change can result in large-scale transformation; unexpected occurrences; how processes as well as events influence outcomes; the informal process of self-organisation; fractal patterning; and, how the system's history influences current behaviour (Anderson *et al.*, 2005). Data to construct the case studies is derived from primary and secondary sources. Primary data were gathered in the form of semi-structured interviews with a range of participants identified with the Mexican and British tourism industries at the time of the respective crises. The interviews were structured to gain specific information from each respondent, depending on their role in the crisis. Secondary data were collected from government reports, independent reports, newspapers, academic journals, and documents provided by interview participants. All of the data were analysed using coding techniques proposed in the literature (see Jennings, 2010; Strauss, 1987; Strauss and Corbin, 1998). The methodology is discussed in more detail in Chapter 4.

1.8: Thesis structure

- Chapter 1: Introduction. The introduction presents the background to the thesis. It briefly introduces the issues which are explored in greater detail in the following two chapters. It also provides the aim, objectives, research question,

and academic contribution of the research and concludes with a short overview of the research methodology.

- Chapter 2: Towards an alternative view of tourism crisis and disaster management. This chapter begins by investigating some of the issues surrounding tourism crises and disasters – crisis and disaster definitions; the tourism industry's propensity to crisis; types of tourism crises and disasters; their impacts; tourist risk perception; risk types; the factors which shape risk perception; and the categorisation of tourists according to risk perception. Following this, the models and frameworks which have been constructed to respond to such events will be considered, with particular emphasis being given to Faulkner's (2001) framework as it has been the most influential to date. The issues which limit tourism crisis and disaster management frameworks are presented and discussed, including the difficulty of implementing a collective strategy; the unpredictability of crises and disasters; the limitations of prescriptive models; the unfeasibility of a one-size-fits-all approach (includes the size and scope and the contextual elements of crises) and coordination issues. The chapter finishes by considering the failure of contemporary theory to sufficiently consider chaos and complexity theory.
- Chapter 3: Tourism as a dynamic complex adaptive system. This chapter further contributes to the contextual framework by exploring the principles attached to dynamic complex adaptive systems and how they relate to tourism crisis and disaster management. It considers the criticism of tourism 'system' models and the subsequent recommendations for the adoption of a chaos and complexity perspective to tourism crisis management. Properties of complex adaptive systems are explored, based on Choi *et al's* (2001) model entitled 'Underlying Dynamics of a Complex Adaptive System'. Particular attention is paid to (i) the 'edge of chaos', which includes a section which considers the suitability of the DMO as the body responsible for crisis management and another section which draws attention to the concept of the learning tourism destination; (ii) the butterfly effect; (iii) bifurcation and cosmology; (iv) self-organisation, emergence and strange attractors, which introduces McMillan's (2002) Fractal Web and Moles-Mole's (2003) Learning Area Process Model.
- Chapter 4: Methodology. The aims and objectives of the research are aligned with an interpretivist research methodology derived from the ontological perspective of multiple realities and a subjectivist epistemology. Bearing in mind the conceptual framework based on chaos and complexity theory, the study proffers a qualitative approach in the form of two case studies, developed from

the analysis of data obtained from semi-structured interviews and related documents.

- Chapter 5: The 2001 Foot and Mouth Crisis. The chapter commences by presenting a brief history of British tourism. This is followed by an investigation into the events of the FMD tourism crisis. The limitations of contemporary models and the manifestation of elements of complexity theory are then considered within the context of this particular crisis. The chapter concludes by contemplating how the preparation and response might have been improved if it had been managed with a complexity theory based perspective.
- Chapter 6: The H1N1 Influenza Crisis. The chapter follows a similar structure to the previous chapter by presenting a brief history of Mexican tourism up to the H1N1 Influenza outbreak and then telling the story of the outbreak. Again, the limitations of contemporary models and the manifestation of elements of complexity theory are considered within the perspective of this crisis. Accordingly, the chapter closes by deliberating how the effects might have been mitigated and the response enhanced if the crisis had been managed with a complexity theory based perspective.
- Chapter 7: Conclusion. The chapter begins by illustrating how the objectives of the research have been met, paying particular detail to the manifestation of the proposed limitations and elements of complexity theory. It considers the feasibility of a learning destination from a practical perspective when bearing in mind a destination's socio-cultural, human, environmental, financial, political and technological capital. It also recommends future research, confirms how the research contributes to knowledge and concludes with a small section entitled 'final thoughts'.

1.9: Chapter summary

This introductory chapter began by drawing attention to the increasingly familiar occurrence of tourism crises and disasters. Several models and frameworks have been developed to assist in the management of such events; however, it was suggested that in the quest for a universal solution, these plans have failed to adequately consider the intricate and complex characteristics of many crises and disasters and the tourism industry in general. This has resulted in the models displaying a number of limitations which ultimately affect their viability as a managerial guide. These limitations range from the use of inappropriate business crisis management theory to a failure to adopt a complexity theory perspective, which, unlike current models, *does* recognise the chaos and complexity of tourism crises and offers the means of not just controlling the situation, but also of reaping benefits from it. In view of the proposed limitations and the

potential offered by complexity theory, it was thus stated that the overall aim of this thesis was to identify whether the limitations are demonstrated in practice and to consider whether a complexity-based perspective on tourism crisis and disaster management represents a more viable framework for managers of tourism destinations preparing for and responding to crises. It will contribute to tourism crisis and disaster management research by providing insight into a perspective which, although regarded by many commentators as having potential, has scarcely been investigated. Using an interpretivist theoretical perspective and qualitative research methods, this research will build upon Speakman and Sharpley's (2012) preliminary study of the H1N1 Influenza crisis in Mexico, in order to achieve a richer, more complete understanding of how complexity theory can be utilised in tourism crisis and disaster management. The first objectives, then, are to review crises and disasters within the context of tourism and contemporary concepts and approaches to planning for and managing them. In doing so, Faulkner's (2001) framework will be examined, as will applications of the framework and other tourism crisis management models. Following this, it will be determined which issues are limiting these models. This is the task for the next chapter.

Chapter 2

Towards an alternative view of tourism crisis and disaster management

'...much critical thought about tourism remains entrenched in an intellectual time warp that is up to 30 years old' (McKercher, 1999: 425).

2.0: Introduction

The purpose of this chapter is to explore critically a number of issues which challenge the extent to which contemporary crisis and disaster management models and frameworks are able to provide adequate solutions to destination crises and disasters. Before these issues are considered, however, it is first necessary to explore a number of points surrounding tourism crises and disasters, namely, crisis and disaster definitions; the tourism industry's propensity to crisis; the impacts they provoke; tourists' risk perceptions; and, the factors which affect such risk perceptions. Following this, the models and frameworks which have been constructed to respond to such events are considered, although particular emphasis is given to Faulkner's (2001) framework as it is widely considered to be the most influential model for tourism crisis and disaster management. Subsequently, the issues which limit tourism crisis and disaster management frameworks are then introduced and discussed, and the chapter ends with a brief introduction to chaos and complexity theory.

2.1: Crisis and disaster definitions

This section considers the debate surrounding crisis and disaster definitions. It will become apparent that the provision of a generally accepted definition has proven to be a rather challenging task. Faulkner (2001) suggests that the principal difference between crises and disasters lies in the root cause, crises being of an internal nature and disasters originating from the external environment. However, while this notion is generally accepted, it will be appreciated that, on occasion, the intricate and complex nature of tourism crises and disasters make identifying the root cause rather problematic.

The field of tourism crisis and disaster management and the wider crisis management literature has been criticised by several commentators for failing to provide specific crisis and disaster definitions. For instance, Santana (2003: 307) complains that 'the literature provides no generally accepted definition of crisis and attempts to categorize types or forms of crises have been sparse', whilst Pforr and Hosie (2007: 252) comment on the 'need to establish common ground'. Both are suggesting that the failure to provide a widely accepted definition, specifically differentiating crises and disasters, negatively affects the development of the field as it results in a situation in which crises and disasters are not being explored independently in their own right. The ability to distinguish accurately between the two phenomena, despite their commonalities, would allow researchers to recognise the precise nature of the entity that they are concerned with, thus affording the precision necessary to enact a more detailed analysis. Consequently, commentators argue that a common, distinct definition for each term would '... highlight the theoretical concepts underpinning these terms and hence allow alternatives to be more easily understood' (Scott and Laws, 2005: 151) and also 'help facilitate a dialogue with other researchers in the crisis management field, vital to advancing knowledge and understanding' (Ritchie, 2009: 4). Santana (2003: 307) believes that this situation has developed because crises and disasters affect a variety of domains and, hence, the definitions which have appeared are adapted to the particular field being contemplated; furthermore, the regular use of crisis synonyms such as 'disaster, catastrophe, jolt, problem and turning point' has contributed to the somewhat nebulous manner in which crisis and disaster definitions are produced. Armstrong (2008) provides an example of the vagueness surrounding the issue by reporting the fact that Cassedy (1991) once used a case study of a disaster (San Francisco earthquake) in a crisis planning manual.

However, it is not just a consequence of lethargy or ignorance that a commonly accepted definition for crisis and disaster has not emerged. It is a genuinely complex matter. This can be exemplified by considering Faulkner's (2001) crisis and disaster definitions. The majority of academics involved in tourism crisis and disaster management appear content to borrow Faulkner's (2001) definitions, provided in his seminal paper *Towards a framework for tourism disaster management* (see Miller and Ritchie, 2003; Anderson, 2006; Ritchie, 2008; Tew *et al.*, 2008). Faulkner (2001: 136) believes that a crisis is 'self-inflicted', the root cause being internal managerial failings or stagnancy, whereas a disaster is a situation with external roots, such as a sudden, unpredicted 'natural phenomena' or 'external human action' (2001:137). He uses Chernobyl to illustrate a crisis situation as it was an event which arose through human shortcomings, whilst the Kobe earthquake and Lockerbie are used to exemplify

disasters – the earthquake was a sudden, dramatic natural event over which there was little or no control, and Lockerbie, an act of terrorism, was a direct result of external human action. Faulkner (2001) is indicating his belief that there exists a distinction between crises and disasters; that is, crises are a consequence of organisational ineptitude, whereas disasters are attributable to an outside influence over which the organisation has little control.

While the illustrations of Chernobyl, Kobe and Lockerbie relate to Faulkner's definitions and provide clear-cut examples of crises and disasters, some situations nevertheless exhibit characteristics which can be associated with both definitions. For example, when considering the FMD outbreak from Faulkner's viewpoint, (see Chapter 5 for the case study of the FMD outbreak), it could be classed as a crisis *or* a disaster, 'depending on the perspective taken' (Miller and Ritchie, 2003: 52). That is, it could be described as a situation in which a tourist destination was confronted with sudden and unpredictable catastrophic changes over which it had little control, thus appearing to fit the categorisation of disaster as triggered by an external event. However, it could also be claimed that it was, to some extent, self-inflicted due to a lack of foresight and planning on behalf of the industry, therefore also placing it under the label of crisis. It could also be argued that the FMD outbreak began as a crisis for the farming industry and then evolved into a disaster for the tourism industry (Miller and Ritchie, 2003) or, to further complicate matters, it began as a disaster for the tourism industry as a result of the (external) actions of the government and media and subsequently developed into a crisis for the industry because it was unprepared to cope with the challenges. Therein lies the dilemma in classifying certain situations as crises or disasters; in some ways they appear to be both crises and disasters, or they swiftly transform from one to the other. Consequently, accurately differentiating between the two often proves to be problematic and entirely subjective.

Some researchers have, therefore, adopted the alternative term 'shock event' (see Scott and Laws, 2005; Bonn and Rundle-Thiele, 2007), described by Armstrong (2008: 5) as a 'useful catch-all term' which 'covers both crises and disasters'. A shock event is defined as 'a sudden and unexpected event that may cause significant stress in individual organisations, seriously threatening their profitability and existence' (Bonn and Rundle-Thiele, 2007: 616). While this description conveniently encompasses both crisis and disaster situations, it is nevertheless a rather languid term which, although avoiding the confusion present when defining complex situations, fails to consider that there is an overlap between crises and disasters that should be considered.

With this in mind, and in spite of the complications which develop in particularly complex crisis and disaster events, Faulkner's (2001) definitions are valuable because they present a foundation from which to consider whether the situation is a crisis or a disaster. In many cases the decision is obvious whilst in more ambiguous scenarios the definition will depend on the researcher or practitioner's perspective. Indeed, Faulkner (2001: 136) was aware that 'the boundaries between natural disasters and those induced by human action are becoming increasingly blurred' and suggested that crises and disasters can be visualised as representing 'opposite poles of a continuum, rather than a dichotomy'. Envisaging crises and disasters as being on the same 'pole of a continuum' is a useful means of reducing some of the complexity which surrounds their definition. It helps to distill the notion that they are related concepts and that they are interlinked, but each possesses individual features which render them distinct entities. Faulkner (2001: 138) also presented five 'key ingredients' of both crises and disasters:

- i. A triggering event, which is so significant that it challenges the existing structure, routine operations or survival of the organisation;
- ii. High threat, short decision time and an element of surprise and urgency;
- iii. A perception of an inability to cope among those directly affected;
- iv. A turning point, when decisive change, which may have both positive and negative connotations, is imminent;
- v. Characterised by 'fluid, unstable, dynamic,' situations (Fink, 1986: 20).

These ingredients characterise both crisis and disaster events and a destination which is able to recognise these features will be in an advantageous position to respond and act upon them, whether the situation is a crisis, a disaster or a combination of both.

This brief discussion has identified the complex issues which prevail when attempting to define crises and disasters. Both phenomena are alike but also quite different, and endeavors to provide a commonly recognised definition have not been met with success. Rather, they have initiated a quite intense debate (see Perry and Quarantelli, 2005, as an example). For the purposes of this thesis, Faulkner's (2001) definitions have been adopted, although it must be borne in mind that there are situations which are uncertain and rather indistinct, when the root cause can be unclear and the decision over whether the destination is in the midst of a crisis or a disaster becomes a subjective one.

2.2: The tourism industry – a propensity to crisis?

This section considers the reasons why the tourism industry and tourism destinations

are particularly susceptible to crises and disasters, the different ways in which such crises and disasters are manifested and the impacts generated by these events on the community and the tourism industry more generally. It will reveal that the industry's vulnerability is exacerbated by several factors which increase the likelihood of a crisis or disaster occurring and that tourism crises and disasters take various forms with unpredictable and variable impacts on destinations. Many of these impacts are undesirable, but positive changes also occur following crises and disasters.

2.2.1: Vulnerability

The vulnerability of tourists and tourism destinations to various hazards is emphasised by Faulkner (2001), who warns of the threat posed by exposure to hurricanes, avalanches and volcanoes in 'high-risk exotic locations' (Faulkner, 2001: 136) and of the danger associated with hijacking and terrorism. This vulnerability is so acute that Faulkner (2001: 146) advises that there is a 'near certainty of... [tourism organisations]... experiencing a disaster of some type eventually'. Coincidentally, his remarks were almost immediately substantiated by a number of events which were to have a significant impact on the tourism industry in various parts of the world. Specifically, an outbreak of Foot and Mouth Disease (FMD) in 2001 impacted severely on the British rural tourism industry whilst the terrorist attacks of September 11th in the United States provoked a major disruption of international travel movements. Indeed, the event contributed directly to a decline in total global tourist arrivals in 2001 compared with the previous year.

The pessimism surrounding the industry was heightened the following year by another terrorist attack, this being the bombing of the Sari nightclub in Bali which resulted in the deaths of more than 200 people, mostly international tourists, and an outbreak of SARS in Southeast Asia. Furthermore, on the 26th of December, 2004, an earthquake under the Indian ocean near the west coast of Sumatra generated a huge tsunami which 'propagated through the Indian Ocean and caused extreme inundation and destruction' (Poisson *et al.*, 2009: 1080), leading to an estimated 228,000 deaths amongst both tourists and local people (UNISDR, 2006). The huge scale of this incident motivated Sharpley (2005: 344) to comment upon the susceptibility of the industry: 'The vulnerability of tourism to risk, crisis and disaster has long been evident. Indeed, the history of modern international tourism is sadly replete with examples of environmental catastrophes, economic crises, political upheaval, terrorist activity, warfare and health scares that have, in one way or another, impacted upon destinations and tourists around the world'. As Sharpley (2005) notes, the vulnerability of tourism is not a novel concept (Richter and Waugh conducted an enquiry into

tourism vulnerability in 1986), but the particularly high impacts of these recent events had eclipsed previous incidents, compelling a significant number of tourism academics to reflect upon the industry's propensity for crises and disasters (see Carlsen and Hughes, 2007; de Sausmarez, 2004, 2007; Miller and Ritchie, 2003; Peters and Pikeemaat, 2005; Pforr and Hosie, 2007; Prideaux, 2003; Ritchie, 2004, 2008; Volo, 2007; Yeoman *et al.*, 2005). The vulnerability of which Faulkner (2001) had forewarned was becoming evident in the form of large-scale adverse events affecting tourism and, as a consequence, it was increasingly considered necessary to identify the factors which render tourism so vulnerable to negative influences.

Calgaro (2010), in particular, refers to several specific factors that contribute towards the vulnerability of tourist destinations. Firstly, tourism is place specific, with destination image playing a hugely important role in tourist risk perception and purchasing decisions. That is, if a destination suffers a negative event which results in bad publicity, then concerned potential tourists can easily review and modify their options. Secondly, tourism is often the main source of income and foreign exchange for many developing countries, and, therefore, a crisis or disaster can result in loss of investment, job reduction, slow economic growth and reduced gross domestic product, especially if the event occurs in or just before high season. Thirdly, the domination of international tour operators in these countries creates an unhealthy dependency on 'outside' influences and their marketing strategies. Fourthly, ignorance towards hazard risks among tourists, business and host communities is often a factor, culminating in limited preparedness for any untoward event, a point previously argued by Faulkner (2001:142) who stated that 'despite the potentially devastating effect natural and man-made disasters can have on tourism, few tourism organisations at the enterprise or destination level have properly developed disaster strategies as an integral part of their business plans'. Finally, tourism is frequently positioned in hazard prone areas at risk from the harsher demonstrations of nature's diverse characteristics.

Henderson (2007) adds to this by suggesting that the industry suffers due to its fragmented structure. It is inherently complex and diverse, being made up of a large number of components which to a certain extent depend on one another, but are also in competition. Included in the tourist industry is the tourist, tourism retailers, modes of transport, the destination community and businesses which exist within it (hotels, restaurants, attractions, etc), regional tourism organisations, national tourism organisations and government organisations. As a result of the inter-connectedness and mutual dependence of these actors, a small incident affecting one component can quickly amplify and spread to all. It is, therefore, evident that the tourism industry,

because of its unique nature, is particularly vulnerable to various negative internal and external influences, which can moderately or severely affect its performance. As a result, it appears that Faulkner (2001) is correct and all tourism destinations can expect some form of disruption sooner or later, although it is almost impossible to predict in which form and to what intensity this may occur.

2.2.2: Types of tourism crises and disaster

In order to illustrate the multitude of incidents which affect the tourism sector, this sub-section identifies a number of crises and disasters which can be identified within Henderson's (2007) economic, political, socio-cultural, environmental, technological and commercial domains.

- i. Economic upheavals which have affected the tourism industry include: the **Asian financial crisis** (Henderson, 1999a, 1999b, 1999c; Muqbil, 1998; Prideaux, 1999; de Sausmarez, 2003; WTO, 1999) and the **world economic crisis** of 2008 (Boukas and Ziakas, 2012; Casado Garcia-Hirshfeld and Ruiz Gomez, 2011; Harrison and Bland, 2009; Papatheodorou *et al.*, 2010; Ritchie *et al.*, 2010).
- ii. Political events include the **general terrorist threat** (Ladkin *et al.*, 2007; Paraskevas and Arendell, 2007; Pizam and Fleischer, 2002; Pizam and Smith, 2000; Richter, 1994; Richter and Waugh, 1986; Seddighi *et al.*, 2001; Sonmez, 1998; Sonmez *et al.*, 1994; Sonmez and Graefe, 1998a): the **terrorist attacks in the USA of 2001** (Blake and Sinclair, 2003; Goodrich, 2002; Stafford *et al.*, 2002; Taylor and Enz, 2002) and the **Bali bombings** (Gurtner, 2004; Henderson, 2003a, 2003b; Hitchcock and Putra, 2005; Korstanje, 2011).
- iii. Socio-cultural crises include **general socio-cultural issues** (Butler, 1974; Crotts, 1996; Freitag, 1994; Mathieson and Wall, 1996; Pelfrey, 1998; Pizam, 1982, 1999; Prideaux and Dunn, 1995; Prideaux *et al.*, 2003; Robinson and Boniface, 1999; Ryan, 1993), **crime** (Brayshaw, 1995; Albuquerque and McElroy, 1999), **religion** (Henderson, 2003c) and **corporate social responsibility** (Henderson, 2007).
- iv. Environmental crises and disasters include **non-specific** (Durocher, 1994; Murphy and Bayley, 1989; Pottorff and Neal, 1994; WTO, 1998), **earthquakes** (Berman and Roel, 1993; Heath, 1995; Huang and Min, 2002; Huan *et al.*, 2004), **tsunamis** (Calgaro and Lloyd, 2008; Carlsen and

Hughes, 2007; Reddy, 2005; Sharpley, 2005; WTO, 2005), **volcanoes** (Aguirre, 2007), **hurricanes** (Baade and Matheson, 2007; Farazmand, 2009), **bush fires** (Armstrong and Ritchie, 2007; Cioccio and Michael, 2007), **forest fires** (Hystad and Keller, 2006, 2008), **avalanches** (Peters and Pikkemaat, 2005), **floods** (Faulkner and Vikulov, 2001), **disease- foot and mouth** (Baxter and Bowden, 2004; Frisby, 2002; Miller and Ritchie, 2003; Ritchie *et al.*, 2003; Rodway-Dyer and Shaw, 2005; Sharpley and Craven, 2001; Williams and Ferguson, 2005), **SARS** (Gu and Wall, 2007; Henderson, 2003a; Henderson and Ng, 2004; Kuo *et al.*, 2008; Leung and Lam, 2004; Mao *et al.*, 2009; Mason *et al.*, 2005; Tew *et al.*, 2008; Zeng *et al.*, 2005), **H1N1 influenza** (Monterrubio, 2010; Speakman and Sharpley, 2012), **global environment** (Henderson, 1999c; Hall and Saarinen, 2010; Penner, 1999; Pollard and Rodriguez, 1993; Santana, 2003).

- v. Technological issues include **airline accidents** (Henderson, 2003b; Ray, 1999), **boat and ship accidents** (Lois *et al.*, 2004; Simms, 1998), **road accidents** (Jones, 2004; Petridou *et al.*, 1997; Wilks, 1999), **amusement parks** (Braksiek and Roberts, 2002), and **fires** (Chow and Kot, 1989; Roberts and Chan, 2000; Simpson and Noulton, 1998).
- vi. Commercial issues include **small business tourism** (Cushnahan, 2003; Getz and Carlsen, 2005; Morrison and Teixeira, 2004; Page *et al.*, 1999; Tinsley and Lynch, 2001) and the **airline industry** (Henderson, 2002b; Lawton 2002).

The examples listed above have all affected the tourism industry to varying extents in recent years, and serve to emphasise the inherent vulnerability of the tourism industry to a plethora of possible crises and disasters. All of these crises and disasters took place in distinct geographical and cultural locations and displayed unique spatial and temporal characteristics, thus producing a variety of impacts on the affected destination (or destinations).

2.2.3: Impacts

A number of negative and positive impacts occur during and after a tourism crisis or disaster. Negative impacts often mentioned within the overall tourism crisis and disaster management literature include infrastructural damage, decline in visitation following an incident, lost revenue, closure of businesses (particularly small

enterprises), cancellation of events, lack of investment, the spread of the crisis to other areas which were originally unaffected (the ripple effect) and socio-cultural disharmony. Negative impacts are frequently discussed by commentators who use case studies as frameworks for analysis (see Cioccio and Michael, 2007; Carlsen and Hughes, 2007; Cavlek, 2002; Coles, 2003; Henderson and Ng, 2004; Hystad and Keller, 2006, 2008; Zeng *et al.*, 2005). For example, Armstrong and Ritchie (2007: 178), investigating issues surrounding the Canberra bushfires in Australia in January 2003, reveal that intense negative media coverage contributed to a fifty percent decline in visitors, thus affecting operators, accommodation providers, amenities and attractions. 'These sensationalised messages gave the inaccurate message that central Canberra with its attractions of national significance had been damaged if not completely destroyed'. Negative media reports bring about a rapid detrimental effect on the destination's image as they affect the risk perception of potential travellers; as Calgaro (2010: 29) points out, 'people will not travel if they feel unsafe or associate negative images (often amplified and distorted by the media) with a particular destination'. Meanwhile, Ghaderi *et al.* (2012) observe that Penang in Malaysia has suffered from the effects of several regional and global tourism crises and disasters in recent years which have caused rescheduling, cancellations, a decline in visitor arrivals, a loss in consumer confidence and a reduction in tourism revenue. Some researchers prefer to explore the impacts of a particular event from within a qualitative framework (see Dombey, 2003; Ritchie *et al.*, 2010). For example, Pine and McKercher (2004: 143) consider the effect of the SARS crisis on the Hong Kong tourism industry: 'Severe impacts from an event such as SARS can be reducing air passenger numbers for some airlines by as much as 80 per cent and hotel occupancies from around 90 per cent to less than 10 per cent in some cases. These reductions had implications on staff, as cost control measures inevitably had to impact on this highest cost sector of the industry...'

Other authors have attempted to quantify the impacts (for example, Blake *et al.*, 2003; Okumus *et al.*, 2005; Pizam and Smith, 2000; Smeral, 2009; Wang, 2009). For instance, Page *et al.* (2012) use an econometric method to evaluate the simultaneous impacts of the global economic crisis and the H1N1 outbreak on tourism demand to the UK within several source markets. They discovered that there was a significant impact on inbound tourism with a loss of 4.7 million visitors in the period 2008 Q1 to 2009 Q2, with 1.6 million of these being attributed to the H1N1 pandemic in 2009 Q2. These undesirable impacts cause immense harm to the tourism industry, but it is important to note at this stage that positive impacts often emerge from the negativity. Various commentators note how the word 'crisis' derives from the Greek word 'Krisis', meaning turning point or decision (Laws and Prideaux, 2005; Paraskevas, 2006; Santana,

2003), while Scott *et al.* (2007) make the observation that the Chinese word for crisis contains characters which signify both opportunity and disaster. Positive changes were evident following the Mount St. Helens volcanic eruption of 1980, as observed by Beatie (1992: 91) who wrote that ‘as a result of this event, an entirely new and larger tourism industry developed...It was truly a transformation that had been unplanned...this natural disaster had a very definite positive impact on tourism’. Similarly, Lo *et al.* (2006) noted an increased unity in Hong Kong’s hotel industry following the SARS outbreak, whilst Faulkner and Vikulov (2001) identified several positive effects that resulted from the Katherine Flood, such as superior infrastructure, improved cohesion within the tourism sector and community in general, raised profile due to media coverage, increased awareness of disaster planning and insurance cover and a better appreciation of tourism within the community (see Table 2.1 below). The positivity which emerges from crisis and disaster scenarios is as important a factor as the initial negative impacts which result from the occurrence of a tourism crisis or disaster. This will be discussed in more detail in the following chapter but, for the purposes of this chapter, it is important to focus on arguably the most detrimental impact of tourism crises and disasters; that is, the impact on potential tourists’ risk perception.

Table 2.1: Longer- term positive and negative tourism impacts of the Katherine Flood

	Positive	Negative
Marketing	Media profile due to flood coverage. Flood history is a potential attraction in its own right.	Focus on flood impacts delays market response beyond restoration of services. Focus on recovery diverts attention/resources from strategic issues.
Infrastructure and investment Improvement in disaster preparedness	Refurbishment of infrastructure Development of tourism disaster management plans. Upgrading of insurance policies to allow for flood damage.	Curtailment of investment in expansion of infrastructure. Losses incurred as a consequence of the flood represent a high price for a ‘wake-up call’.
Cohesion	Team spirit and cooperativeness galvanised within tourism sector. Improved community awareness of tourism benefit.	Tensions between tourism sector and business community over allocation of resources.
Human resources	“Acid test” for staff	High staff turnover and loss of experienced staff.

Source: Faulkner and Vikulov (2001)

2.3: Risk perception

This section examines a number of the issues associated with risk perception. It describes what is meant by the term 'risk perception' and investigates the various types of risk which influence travelers' decision making. It assesses the range of factors which 'shape' a person's risk perception, and observes that tourists can be placed into certain 'travel preference groups' which categorise their level of risk perception.

Mowen and Minor (1998: 176) define perceived risk as 'a consumer's perception of the overall negativity of a course of action based on an assessment of the possible negative outcomes and the likelihood that those outcomes will occur'. Tourists are deterred from visiting a destination if they believe that it will result in a negative impact, especially if it involves a threat to their physical or emotional well-being; they will quite simply substitute the destination which they associate with risk for another which is considered 'safe' (Cavlek, 2002), or not travel at all. This is especially significant during and following a crisis or disaster or, at least, what the observer perceives to be a crisis or disaster. That is, tourists make their travel choices based on perceptions, even though in many cases these perceptions do not accurately reflect the reality of the situation (Rittichainuwat and Chakraborty, 2009). As stated by McConnell (2003: 393), 'what constitutes a crisis is a matter of judgment, not a matter of fact'. For example, circumstances are frequently overstated by the media and governments, and the perceived negative risk which thus emanates from the affected destination significantly influences traveler's behavior. This was the case when the severity of the SARS outbreak (although significant) was exaggerated by the media (Hall, 2003) and contributed to a huge downturn in tourism activity in affected areas (Mason *et al.*, 2005).

Tourist risk perception is, therefore, a crucial factor in the academic study of crises and disasters (Laws and Prideaux, 2005) and an understanding of the issues associated with risk perception is essential for practitioners attempting to manage crises (Lee *et al.*, 2012, Ritchie, 2004).

2.3.1: Risk types

The tourism industry is prone to a number of risks which discourage people from travelling. Commentators have identified the following threats:

- (i) **Conditions which tourists perceive as an actual physical threat.** This

includes: **physical risk**, that is, the possibility of physical danger, injury or sickness while on vacation (Roehl and Fesenmaier, 1992); It includes **health**: the possibility of becoming sick while travelling or at destination; **terrorism**: the possibility of being involved in a terrorist act; **political instability**: the possibility of becoming involved in the political turmoil of the country being visited (Somez and Graefe, 1998b); the risk of **natural disasters**, such as hurricanes, weather, forest fires (Floyd and Pennington-Gray, 2004); **environmental risk**, including natural disasters, such as landslides (Dolnicar, 2005); **infection and disease** (Kozak *et al.*, 2007); and the **fear of crime** (Park and Reisinger, 2010).

- (ii) **Conditions which tourists perceive as a threat to their emotional well-being:** **Equipment risk**: the possibility of mechanical, equipment, organizational problems while on vacation; **financial risk**: concern that the vacation will not provide value for money spent; **psychological risk**: the possibility that a vacation will not reflect an individual's personality or self-image; **satisfaction risk**: the risk that a vacation will not provide personal satisfaction; **social risk**: the possibility that a vacation will affect others' opinion of the tourist; **time risk**: the possibility that a vacation will take too much time or be a waste of time (Roehl and Fesenmaier, 1992).

Other risks include **socio-cultural risks**: includes variables such as time, satisfaction, psychological, social (Reisinger and Movondo, 2005); **planning risks**, such as an unreliable airline, an inexperienced operator, no assured flight home; **property risk**: theft, loss of luggage (Dolnicar, 2005); **legal procedures, border procedures and socio-economic differences** (Canally and Timothy, 2007); and **cultural risk**, for example, experiencing difficulty in communicating with foreigners, or the inability to adjust to a foreign way of life (Park and Reisinger 2010).

A final curious addition can be found in an article by Rittichasinuwat (2011) which concerns the **effect of ghosts** on risk perception. As she explains: 'It is interesting to note that, in some cases, a destination can be physically safe, but still perceived as unsafe psychologically, as in the case of the tsunami-hit beaches of Phuket, Khao Lak, and Phi Phi Island in the South of Thailand...many inbound Chinese and Thai tourists substituted their original travel itineraries to tsunami-affected areas with trips to other beach resorts due to perceived risks affiliated with ghosts and uncomfortable feelings about enjoying themselves at a resort where a lot of people had been killed...' (Rittichasinuwat, 2011: 437-438).

Types of risk are, therefore, numerous and can range from a potential tourist being worried that they may not get value for money or that they might be wasting their time, to fear of becoming victim of a terrorist attack or being involved in a natural disaster. The range of perceived risks also implies that people perceive risk in different ways. In other words, what may appear risky to one person may not be perceived as risky to another, so while some ponder the likelihood of an airplane accident, others are concerned about becoming a victim of crime. The fact that risk perceptions differ among individuals undoubtedly has underlying roots in the way in which people's attitudes or perceptions are socially constructed.

2.3.2: Factors which shape risk perception

Jonas *et al.* (2011:88) state that: '... perceived risk is shaped by consumers' past experiences, lifestyle, sociocultural and demographic background characteristics, and the culture of each tourist consumer'. That is, a person with a susceptibility to a certain risk has been 'shaped' that way through personal experience and knowledge and has developed an aversion to being in a particular situation. According to the literature, the factors which shape, or form, individual risk perception include: personal characteristics (Roehl and Fesenmaier, 1992; Sonmez and Graefe, 1998b); tourist role or type (Lepp and Gibson, 2003; Roehl and Fesenmaier, 1992); previous travel experience (Kozak *et al.*, 2007; Lepp and Gibson, 2003; Sonmez, 1998; Sonmez and Graefe, 1998a, 1998b); information search and sources (Kozak *et al.*, 2007; Pizam *et al.*, 2004; Sonmez and Graefe, 1998b); life stage/age (Gibson and Yiannakis, 2002; Lepp and Gibson, 2003); gender (Carr, 2001; Lepp and Gibson, 2003; Pizam *et al.*, 2004); personality type (Lepp and Gibson, 2008; Pizam *et al.*, 2004; Reisinger and Movondo, 2005); nationality (Hurley, 1988; Kozak *et al.*, 2007; Pizam *et al.*, 2004; Sonmez, 1998; Seddighi *et al.*, 2001; Reisinger and Movondo, 2006; Tremblay, 1999); education (Sonmez and Graefe, 1998b) socio-economic status (Lepp and Gibson, 2003) and socio-psychological needs (Gibson and Yiannakis, 2002) (see Qi *et al.* (2009: 47).

2.3.3: Categorisation of tourists according to risk perception

A consequence of these factors, or shapers, is that tourists can be divided into groups which ultimately are comprised of, on the one hand, those who are risk averse and, on the other hand, those who are in some way attracted to risk, or at least not overly concerned with the threat. For example, Cohen's (1972) enduring research categorises tourists into four distinct groups according to their preference for novelty or familiarity: the organised mass tourist prefers familiarity and the 'environmental bubble' (Lepp and Gibson, 2003: 609) of a packaged tour; the individual mass tourist travels independently although making sure not to stray from the regular tourist path; the explorer seeks to investigate the local culture but only from a familiar vantage point,

whilst the drifter avoids the usual tourist routes and chooses instead to interact with the local social system. It is implicit from the carefree attitude and eagerness to experience the destination's authentic culture that Cohen's (1972) explorer and drifter tourist feel less vulnerable to danger than the organised and individual mass tourists. This is because their personal beliefs and conditions (that is, the way that they have been socially or culturally shaped) limit their perception of risk, or at least their vulnerability to such risks. Indeed, Lepp and Gibson (2003: 617) make a point of commenting that '...what may be a source of fear for the organized mass tourist may be a source of excitement for the drifter'. Meanwhile, Roehl and Fesenmaier (1992) identify three groups of tourists according to perceptions of risk: the risk neutral group view travel as a generally safe activity and emphasise the 'adventure' aspect of travelling; the functional risk group are more conservative in their behavior and demonstrate concerns over equipment failure and physical safety; finally, the place risk group regard visits to new destinations as risky. On analysis, Cohen's (1972) explorer and drifter tourists can be identified with the risk neutral group; that is, they fundamentally consist of tourists who are either drawn by risk or not troubled by it. Similarly, the organised mass tourist and the place risk group are comparable in that they consist of risk adverse tourists who categorically wish to avoid risk.

In summary, it is apparent that there exist a number of distinct risks affecting tourism, some of which carry a physical threat, while others are related to the emotional well-being of the tourist. These risks are perceived differently according to the nature of the risk and the personal and socio-cultural background of the observer. While risk perception is subjective and dependent on the individual, it is possible to group tourists into distinct categories according to how they view their own vulnerability to outside threats. An awareness of these issues allows academics a broader scope of study and practitioners opportunity to attempt to diminish the risks associated with their destination by improving marketing efforts, particularly in the recovery phase following a crisis or disaster.

It has thus been identified that the tourism industry is particularly vulnerable and susceptible to crises and disasters which can present themselves in numerous forms and guises. These incidents, which for various reasons appear to be on the increase, can sometimes have profound negative repercussions for the destination; significant physical, structural damage can occur to the 'hardware' (Xu and Grunewald, 2009: 107) of a destination, which necessitates repair and rebuilding, but perhaps ultimately more damaging are the negative perceptions which can arise following a crisis or a disaster. Images and reports of chaotic, dangerous situations evidently influence tourist

decision making and can cause a significant decline in arrivals, although it should be noted that, frequently, arrivals figures return to pre-event levels relatively quickly. Meanwhile, Armstrong and Ritchie (2007: 176) remark that 'the recent globalisation of media and information dissemination...has meant that negative perceptions of a destination can rapidly erode its marketability. Therefore, destinations need to prepare themselves with strategic, effective and up-to-date plans for handling crises and disasters'. The following sections will consider the crisis management plans which have been developed to prepare and respond to such events; ultimately, 'although understanding the nature of crisis is important, understanding how to manage crises is more critical' (Ritchie *et al.*, 2003: 203).

2.4: Tourism crisis and disaster management

This section investigates Faulkner's (2001) disaster management framework and other tourism crisis and disaster management models which have since appeared. The discussion regarding Faulkner's (2001) framework focuses on the directives offered within the framework's disaster lifecycle phases which consist primarily of material borrowed from the crisis, disaster and emergency management literature. It then notes how Faulkner's (2001) framework was quickly applied to several crises and disasters, leading to the general prognosis that while it was useful for crises and disasters which were limited in size and scope, it was inadequate for larger, more complex situations. The section will conclude by considering new tourism crisis and disaster models which offer alternative crisis management strategies.

2.4.1: Faulkner's framework

There were sporadic publications in the field of tourism crisis and disaster management throughout the 80's and 90's (Arbel and Bagur, 1980; Cassedy, 1991; Drabek, 1995; Lehrman, 1986; Pizam and Mansfield, 1996; Young and Montgomery, 1998), but the subject was not taken particularly seriously, a situation which provoked Santana (2003: 304) to comment that 'crisis management is an issue that has been largely overlooked by the industry and tourism scholars alike'. There has since been an upsurge in research, as noted by Pforr (2006:2): 'Evidence for a growing sensitivity and awareness for crisis in the tourism industry is a sharp increase in the number of publications dealing with crisis management in the field of tourism in the past five years'. This escalation in research was stimulated by a combination of two factors; the publication of Faulkner's (2001) seminal article *Towards a framework for tourism disaster management* and, as mentioned earlier, five extremely high-profile shock events which followed shortly afterwards, namely the FMD outbreak, the terrorist attacks in the US, the Bali bombings, the SARS outbreak and the Indian Ocean tsunami, all of which stimulated global interest owing to their unique intensity and

extensive media coverage.

Faulkner (2001: 146) had complained that the field 'lacked the conceptual framework necessary to structure the cumulative development of knowledge about the impacts of, and effective responses to, tourism disasters', and that the absence of scholastic attention was reflected in the fact that the majority of destinations failed to develop adequate disaster management plans. He sought to address the situation by constructing the *Tourism Disaster Management Framework* (Figure 2.1 below). In contrast to already existing organisational crisis and disaster management models and frameworks, Faulkner's (2001) framework differed to the extent that it was intended for a wider audience. As Armstrong (2008: 21) explains: 'After appropriate testing had been conducted it was intended for practical use by industry and government as it dealt with destination management organisations and host communities rather than businesses as in other literature'. That is, it was directed towards the destination in general, rather than specific businesses, as it is the entire tourism community which is affected by a crisis or disaster and subsequently must form a coordinated response.

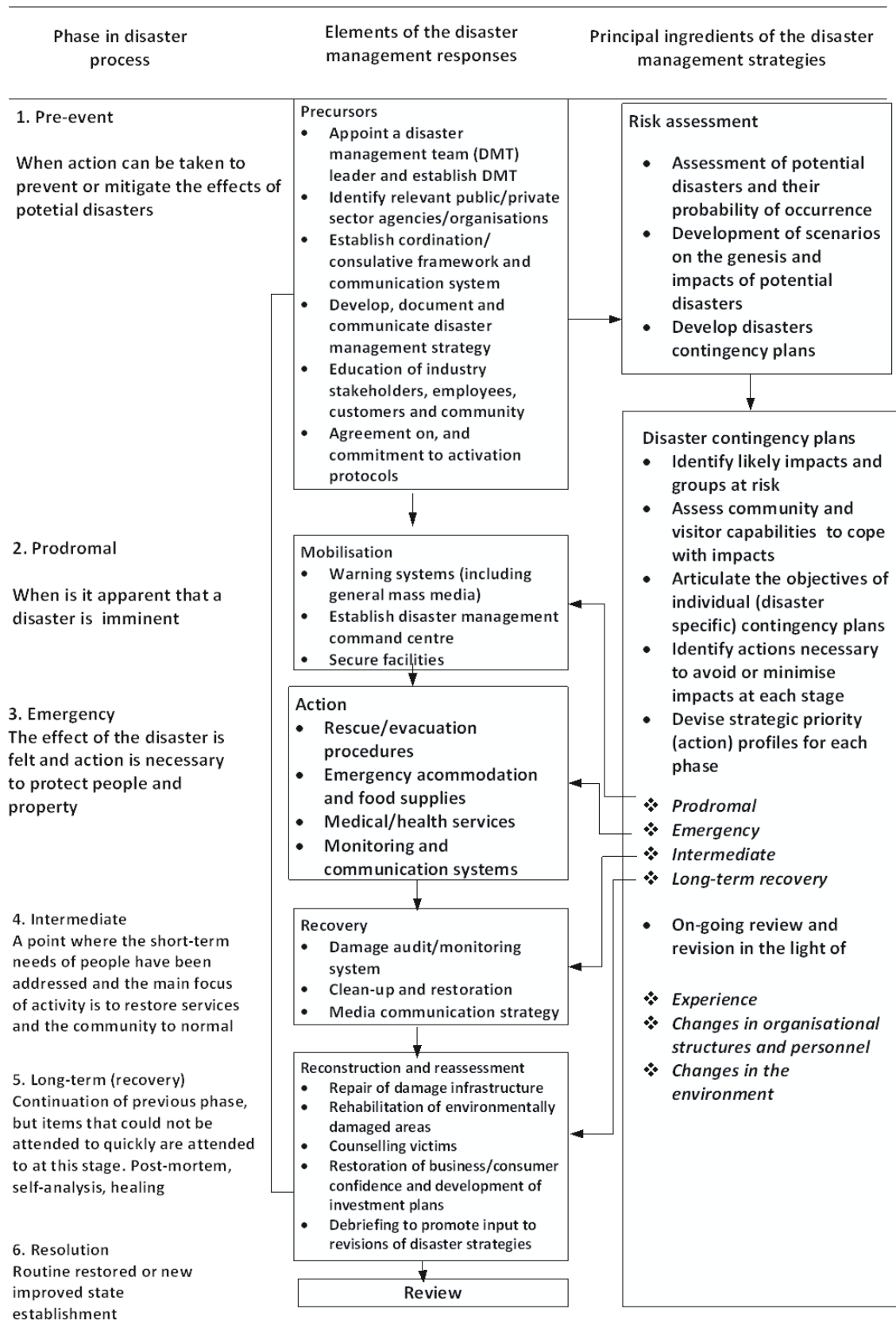
2.4.2: Faulkner's framework and its relation with crisis and disaster management theory

Before introducing his framework, Faulkner (2001) initially argues that the world is becoming increasingly disaster prone, referring to the work of Blaikie *et al.* (1994), Burton *et al.* (1978) and Richardson (1994), amongst others, to support his claim. He draws upon Selbst's (1978) crisis definition and Fink (1986), Keown-McMullan (1997) and Weiner and Khan's (1972) crisis characteristics, and also draws attention to concepts of chaos theory mentioned by Gleick (1987), Prigogine and Stengers (1985) and Peat (1991).

Phases in disaster process:

The framework (see Figure 2.1) consists of a number of phases, or stages, which collectively are called the crisis or disaster lifecycle. Starting at the pre-event phase and culminating with the resolution, the six-stage framework presents recognisable moments for managerial intervention and academic study. It borrows from concepts related to organisational crisis management and disaster planning fostered over the previous two decades by Fink (1986), Smith (1990), Pearson and Mitroff (1993), Richardson (1994) and Roberts (1994).

Figure 2.1: The tourism disaster management framework



Source: adapted from Faulkner, 2001

It was Fink (1986) who originally developed the concept of a crisis and disaster lifecycle by offering a four stage framework consisting of the prodromal stage – a phase when an oncoming crisis is evident and there is still time to react by preventing or at least by mitigating the event; the acute crisis stage, when the crisis has arrived and damage limitation is the objective; the chronic stage – for ‘clean-up, post-mortem, self-analysis and healing’ (Faulkner, 2001: 140); and the resolution stage, in which the organisation returns to its previous or a hopefully improved state.

Roberts (1994) likewise suggests that there are four phases to what he refers to as ‘incidents’ (1994: 44). The first of these is the pre-event, during which plans can be developed to prevent or mitigate crises or disasters, the second stage is the emergency phase where priority is given to the protection of people and property, and the third stage is the intermediate stage in which the objective is a quick return to stability by focusing on the restoration of essential services and dealing with the immediate needs of the affected citizens. Finally, the fourth stage is the long-term phase during which Roberts lists a number of tasks to be attended to by the local authority, including the reparation of damaged infrastructure, dealing with environmental concerns, provision of clear information to community, securing financial help and learning from the experience.

Faulkner proposes various responses to manage the components of each phase.

Pre-event stage:

Precursors:

Following Cassedy (1991), who produced a planning manual for PATA, Faulkner (2001:143) first suggests the appointment of a disaster management team leader, ‘a senior person with authority and able to command respect (ability to communicate effectively, prioritise and manage multiple tasks, ability to delegate, coordinate and control, work cohesively with a crisis management team, make good decisions quickly)’, and the establishment of a disaster management team. According to Kash and Darling (1998), the team should have a clear command structure and should meet regularly to discuss crisis and disaster issues, in which detailed plans for high risk situations are developed and contingency plans are also established for those situations deemed to be a lesser risk. Again, following Cassedy (1991), and noting the issues raised by Heath (1995) regarding poor communication and coordination, Faulkner (2001) proposes that the team forms relationships with relevant agencies and organisations from the public and private sector (government agencies, other tourism agencies, emergency services, health services, the local community and the media).

The purpose of these relationships is to develop an ongoing consultative environment which can serve to promote coordination and effective communication in times of crisis. In the words of Faulkner (2001:145), 'given the range of public and private sector organisations that are directly and indirectly involved in the delivery of services to tourists, the development and implementation of a tourism disaster strategy requires a coordinated approach, with a designated tourism disaster management team being established to ensure that this happens. This team needs to work in conjunction with various other public sector planning agencies and providers of emergency services in order to ensure that the tourism industry's action plan dovetails with that of these other parties'. It is important that crisis and disaster management strategies are communicated to all stakeholders, especially employees and customers, so that all those concerned have an understanding of what is expected at times of crisis and that everybody agrees to commit to the protocols laid down by the crisis plan.

Risk assessment:

Borrowing from Turner (1994), Faulkner (2001) identifies risk assessment as a crucial component of pre-event planning. It involves an appraisal of potential threats and the probability of their occurrence, from those which appear plausible to the highly unlikely, and the subsequent development of contingency plans.

Contingency plans:

This involves the anticipation of the short and long term impacts and identification of the most vulnerable groups. As suggested by Drabek (1992, 1994) and Burby and Wagner (1996), tourists are at risk because they are not familiar with local threats and resources, with many tourist activities taking place in 'exotic' locations where, perhaps, there is a significantly higher incidence of natural disasters (for example, Southern Thailand's proximity to the Sumatra fault line (Gurtner, 2007)). Faulkner (2001) pays particular attention to both community and individual impacts and responses to crisis and disaster events, reflecting on work by Arnold (1980), Chan (1995), Geipel (1982), Granot (1995) and Richardson (1994), which leads to the proposal of a community capabilities audit 'so that the appropriate level of emergency relief from external sources can be determined' (2001:145). Turner (1994) advises the formation of specific strategic actions for each phase so as to evade or diminish the negative impacts for the need of and that these actions are articulately communicated to all stakeholders.

Strategic priority profiles

Prodromal phase:

An effective system of warning communication is of utmost importance (Drabek, 1992, 1995). Once a hazard or threat has been detected (for example meteorologists may become aware of an approaching hurricane), a warning is required for those inhabiting the hazard zone and this can be done by media outlets such as television, radio or newspaper, or by emergency personnel such as police or army. Following Cassedy (1991), Faulkner (2001:143) suggests the establishment of a command centre, 'a specific location and facility with relevant communication and other resources for the crisis management team', and the need to secure additional amenities such as emergency refuge facilities.

Emergency phase:

As the effects of the event are felt, Faulkner (2001) concentrates on the physical necessities of those involved. Roberts (1994) stresses that action must be taken to rescue people and property, while Young and Montgomery (1998) indicate that rescue and evacuation procedures must take precedence over marketing efforts at this stage. The emergency refuge facilities alluded to in the previous phase may need to be utilised along with the securing of food supplies and medical aid. Systems also need to be in place to monitor the impacts of the crisis and it is important that emergency communications issued to the general public, government, media and other stakeholders are of an open and honest nature.

Intermediate phase:

Roberts (1994) states that the general objective of the intermediate phase (he also labels it the emergency recovery phase) is a return to stability. After calculating the cost of the physical impact, the next step is to re-establish services and repair the damaged infrastructure of the destination. Faulkner (2001) mentions the media communication strategy, as cooperation with the media is considered a critical element of disaster control and recovery (Fink, 1986; Keown-McMullan, 1997; Riley and Meadows, 1997; Quarantelli, 1996; Young and Montgomery, 1998). The media can be helpful as a channel for the propagation of warnings and accurate information, but it can also be extremely destructive with its tendency towards sensationalism and inaccurate reporting.

Long term (recovery):

Roberts (1994:46) lists a number of tasks that can now be dealt with in the 'long-term phase'. Clearly influencing Faulkner, these include: (i) repairing damaged structures

and services; (ii) dealing with the long-term environmental consequences; (iii) dealing with stress and counseling; (iv) developing a re-investment policy in the area; (v) producing a financial plan to pay for the disaster and its implication; (vi) securing government and other agencies for financial aid; and (vii) assessing response; learning from the experience.

According to Faulkner (2001), the key to destination recovery lies in how well the market communication strategy is combined with the disaster management strategy. Sonmez *et al.* (1999: 16) concur, stating that 'it is imperative for destinations to augment their crisis management plans with marketing efforts, to recover lost tourism by rebuilding a positive image.' Following the transmission of truthful information via the media in the previous two stages, it is now considered time for a restoration of consumer and investor confidence by concentrating on market recovery and organisational learning. Burling and Hyle (1997), conducting a study regarding school emergency planning in the US, noticed that lessons supposedly learned from disasters were failing to be incorporated into future disaster planning and Faulkner (2001: 146) suggests that it is imperative that such knowledge is 'tapped through a systematic debriefing procedure...'.

Resolution:

As noted previously, crises and disasters often have not just negative, but also positive impacts and the desired outcome is not just a return to normality but realignment to a new, improved state.

Overall, Faulkner's (2001) model is an integration of crisis and disaster management philosophy specifically tailored to guide a destination through a crisis or disaster, containing elements of crisis communication, marketing, organisational, chaos, complexity, human resource, social and stakeholder theory. It is generic and so, theoretically, elements of the framework can be utilised by a range of organisations within the tourism system, from small private businesses to national, regional or local tourism organisations, but it appears to be essentially structured for use by government or private sector tourism organisations so that they can plan, respond to the initial detrimental effects of a crisis or disaster and then re-market their individual tourism product so that it can fulfill its economic, environmental and socio-cultural potential.

Following its publication, Faulkner's (2001) framework served to ignite curiosity amongst academics and, consequently, a number of studies have since followed which examine issues related to tourism crisis and disaster management. Some of these

discuss, apply and occasionally modify Faulkner's (2001) framework, whereas others provide distinct crisis and disaster management models. Overall, the influence of Faulkner's (2001) model on the field of tourism crisis and disaster management cannot be overstated, so much that it 'may be considered to epitomise contemporary models of tourism crisis and disaster management' (Speakman and Sharpley, 2012: 2).

2.4.3: Applications and modifications of Faulkner's framework

A number of scholars have employed Faulkner's (2001) framework to examine tourism crises and disasters. It was found to be useful when applied to short-lived disasters which occur within a limited geographical setting, such as the Katherine flood in Australia (Faulkner and Vikulov, 2001) and the Galtuer avalanche in Austria (Peters and Pikkemaat, 2005). Peters and Pikkemaat (2005: 17) claim that 'Faulkner's (2001) scheme seems to be an appropriate framework for analysing complex crisis management steps in Alpine resorts'. The framework appears to be limited, however, when tested on crises of a more complex nature which exhibit a wider range and scope. For example, Henderson (2002a) applied the framework to the Bali bombings of 2002 and noted that the disaster began at the emergency phase of the disaster process, completely by-passing the pre-event and prodromal phases, thus bringing into question the reliability of the crisis lifecycle and the assumption that all the phases will occur in a sequential order. Prideaux (2003) makes the same observation when investigating several events that had affected the Australian tourism industry, and hence proposes several modifications which he suggests would allow the framework to be used in larger crises and in a wider range of situations. Miller and Ritchie (2003) used the framework to analyse the effects of the FMD outbreak in the UK generally, and on the Cheltenham Horseracing Association in particular. They remark that although it is useful as an analytical tool, it would be of little use to managers attempting to navigate through an intricate crisis such as the FMD outbreak, the size and scope of which made strategic decision making rather complicated. Henderson and Ng (2004) examined the reaction of hotels in Singapore to the SARS outbreak and likewise suggest that Faulkner's (2001) model is suitable for analysis, but the fact that the crisis/disaster began in the emergency phase signifies that it would have proved difficult as a guide for practitioners. Meanwhile, Scott *et al.* (2007) sense an incompleteness in the market recovery stage of Faulkner's (2001) framework and propose modifications to phase 5 (long term recovery), founded on social network analysis and chaos theory. It is purported that 'theoretical insight' could be achieved by examining how 'organisations achieve recovery as members of dynamic functional networks' (Scott *et al.*, 2007: 12). Lyon and Worton (2007) apply the framework to the FMD crisis and suggest that it is more appropriate to a crisis situation rather than a

disaster. They offer several modifications, placing an emphasis on risk assessment and proposing that a resource audit is conducted prior to the development of contingency plans of action. Finally, Henderson (2008) applied the framework for a third time in relation to the 2006 terrorist plot which planned to disrupt the airline industry in Britain and acknowledged that while it was useful for strategic planning and as a guide, the framework has some serious limitations in that the pre-event, long term (recovery) and resolution phases are 'not distinguished with clarity' and 'occupied longer periods of time than conveyed in the model...' (Henderson, 2008: 134). Not only this, the case study demonstrated how unique experiences can cause 'actors' to react differently in the same situation, possibly creating conflict and subsequently other crises.

The general conclusion to arise from these studies is that Faulkner's (2001) framework is useful in certain situations, such as a natural disaster of limited duration and scope, but it is inadequate in large scale or more complex crises or disasters. The drawbacks of the framework will be examined shortly but first it is necessary to consider briefly other tourism crisis and disaster management models proposed in the literature.

2.4.4: Tourism crisis and disaster management models and frameworks

Faulkner's (2001) framework was instrumental in the development of consequent models which either build upon his ideas or are more original. The most well-known of these is Ritchie's (2004) strategic and holistic management framework, in which Faulkner's disaster life cycle is aligned with three main stages, namely, prevention and planning, implementation, and evaluation and feedback, which contain directives for managers to follow before, during and after a crisis or disaster. Although in many respects similar to Faulkner's (2001) framework, the key to Ritchie's (2004) model is its emphasis on flexibility, organisational structure and learning, aspects which Faulkner (2001) hinted at but failed to address adequately. Ritchie (2004), perhaps with the benefit of hindsight following his research on the FMD crisis (see Miller and Ritchie, 2003; Ritchie *et al.*, 2003), has taken into account the uniqueness of crises and disasters, particularly how their size, scope and longevity can differ significantly, and this is reflected in his framework. Later, Armstrong (2008) applied Ritchie's (2004) model to a case study of the bush fires which affected the Australian Capital Territory in 2003 and subsequently re-developed the model to reflect her research findings. She includes material from Faulkner's (2001) framework but significantly chooses to neglect emergency management issues, a prominent feature of Faulkner's (2001) framework, because she does not consider this to be a specific responsibility of the tourism industry.

Page *et al.* (2006) offer a crisis management framework for national Destination Management Organisations (DMOs), which was prepared following a scenario planning exercise in which they imagined the impacts of a global flu pandemic on Scottish tourism. Less sophisticated than Faulkner's (2001) and Ritchie's (2004) efforts (although the scenario exercise was very detailed), it highlights actions to be taken at the pre-crisis, crisis and recovery stage of such a situation. Meanwhile, Hystad and Keller (2008) present a descriptive model which was derived from their research following the 2003 forest fires in Kelowna, Canada. The model seeks to convey the importance of stakeholder cooperation throughout a crisis or disaster and the change in their roles as events change. Finally, Xu and Grunewald (2009) propose a descriptive framework for the government and private tourism industry. Faulkner (2001) and Ritchie's (2004) frameworks are supplemented with information gained from various case studies found in the literature (for example, Blake and Sinclair, 2003; de Sausmarez, 2005; Faulkner and Vikulov, 2001; Hitchcock and Putra, 2005; Hystad and Keller, 2008; Kim *et al.*, 2005; Miller and Ritchie, 2003) and a case study of the Sichuan earthquake in China of 2008. The framework contains proactive and reactive strategies which ascertain the need for effective planning, communication, resource management, stakeholder collaboration and resolution.

This section has observed the influence of Faulkner's (2001) framework in the recent tourism crisis and disaster management literature, illustrated by various applications and modifications to the original framework and by 'alternative' models which, nevertheless, borrow features from the framework. However, despite its undoubted influence, Faulkner's (2001) framework has only been successfully applied to two natural tourism disasters whilst limitations were evident when attempting to employ it on larger, more complex crises.

2.5: Limitations of contemporary tourism crisis and disaster management models

This section considers a number of limitations which can be associated with Faulkner's (2001) framework in particular and other contemporary tourism crisis and disaster management models in general. The first of these relates to the influence of organisational crisis and disaster management theory on the construction of destination crisis and disaster management plans. It is suggested that while theory which is related to the concept of an organisation provides some useful conceptions as a basis for understanding tourism crisis management, the evident dissimilarity between a business organisation and a tourism destination in both scope and character signifies that not all theory which is pertinent to organisational crises necessarily applies to tourism crises.

The second limitation relates to the unpredictability surrounding the occurrence, evolution and impact of destination crises and disasters. A chief element of Faulkner's (2001) framework involves the preparation of contingency plans from initial risk assessments but, in reality, these plans are often compromised when 'unexpected' crises and disasters arrive and do not compare with the imagined scenario. The third factor to be considered is the unpredictable manner in which crises and disasters evolve and how this limits the feasibility of the prescriptive directives found in contemporary tourism crisis management plans. The rigid, step by step guidelines often fail to correspond with the situation at hand as the crisis evolves in a chaotic, unforeseen fashion. Moreover, these instructions may ultimately hinder innovation as managers adhere rigidly to the crisis plan, despite possibly being aware of more appropriate alternatives.

The fourth point is that Faulkner's (2001) framework is limited because it suggests the same approach for all crisis and disaster situations, in effect providing a 'one size fits all' approach. This is unrealistic because each crisis or disaster is unique. For example, they vary in size and scope, some being suitable for Faulkner's framework (Katherine flood), while others are inappropriate (FMD crisis). They also differ in the context within which the crisis or disaster occurs as national culture, destination culture, destination structure and the government's relationship with tourism all contribute to a distinctive set of circumstances. Finally, the fifth limitation involves the tourism crisis planning prerequisite of co-ordination, which often proves difficult to facilitate due to issues associated with the cultural, structural and political characteristics of the destination.

2.5.1: The application of organisational crisis and disaster management theory to destination crisis management: the difficulty of implementing a collective strategy

As discussed earlier, in developing his framework Faulkner (2001) drew upon and combined material from the broader organisational crisis and disaster management literature. Owing to the impact of Faulkner's (2001) framework on the field of tourism crisis management, this implies that the majority of tourism crisis management models have been strongly influenced by organisational crisis management theory. This was observed by Sharpley (2004: 284), who states that, 'typically, these [models] draw on the theory of crisis management as it relates to the business organisation, providing a useful conceptual basis for exploring crisis management in tourism'. While it is true that the concept of the 'organisation in crisis' does provide a useful conceptual base from which to analyse the process of destination crises management, care must be taken

not to accept the congruence between a business organisation and a tourism destination too literally, or to carelessly apply the theory and concepts associated with the behaviour of a single, business organisation in crisis to a tourism destination in crisis. Much of the organisation crisis literature relies on a collective strategy, but this is difficult to implement in a tourism destination because stakeholders view matters from differing perspectives and are not always willing to follow the directives of crisis planning.

Different perspectives:

A tourism destination is quite evidently not integrated to the same extent as a business organisation due to the diversity of its components, an issue commented upon by Campiranon and Scott (2007: 142): ‘...unlike organisations, tourism destinations are much less cohesive and involve many different and diverse groups of stakeholders; the community, individual business operators, sectoral organisations, regional tourism organisations, local, state, and national government representatives (and indeed anti-government factions), and many others’. This distinction is also noted by Buhalis (2000: 9) who remarks that ‘destinations cannot be managed or marketed as enterprises, due to the dynamics of interests and benefits sought by stakeholders’.

Consequently, in a crisis or disaster situation, these diverse groups will have differing perspectives on the situation and will often be in competition, with implications for the coordination aspects of tourism crisis management. As McKercher (1999: 426) explains, ‘...most tourism businesses are independent and, therefore, will act in an independent way, doing first what is in their own best interests and secondarily what is in the best interests of the community in which they exist’. Conversely, business organisations tend to exhibit a ‘homogenous’ culture in which stakeholders generally share the same objectives and concerns (Campiranon and Scott, 2007: 42), a condition which supports the coordination process.

Therefore, to summarise briefly, the use of theory associated with organisational crises is compromised when applied to a tourism destination setting because organisations and destinations differ significantly with regards to the cohesion and receptiveness of their components. Given the importance of coordination to the recovery process, this substantially undermines the efficacy of contemporary tourism crisis management models.

2.5.2: The unpredictability of crises and disasters

Fink (1986: 7) states that 'any time you (i.e. managers) are not in a crisis, you are instead in a pre-crisis, or prodromal mode' and, accordingly, tourism academics regard preparation, in the form of pre-crisis planning, as a critical ingredient of tourism crisis and disaster management. The common consensus is that being in a state of readiness can either prevent the crisis from happening or, at the very least, can mitigate the impacts of a crisis when it occurs. Faulkner (2001: 144) believes that a pro-active approach helps to 'prevent or mitigate the effects of potential disasters' and, according to Evans and Elphick (2005: 136), it provides an opportunity 'to assess the risks that the business is prone to and to have robust and clearly articulated contingency plans in place so that they are able to react quickly and effectively'.

Strategies for pre-crisis planning include the establishment of a crisis and disaster management team (Faulkner, 2001; Ritchie, 2008; Tew *et al.*, 2008); risk assessment, scenario analysis and development of contingency plans (Faulkner, 2001; Ritchie, 2004); the establishment of a communication network (Evans and Elphick, 2005; Ladkin *et al.*, 2008) and stakeholder education (Faulkner, 2001; Hystad and Keller, 2008; Ritchie, 2008). In other words, the process involves the formation of a special crisis management team which 'scans' the environment for potential problems and prepares specific plans for different scenarios. At the same time, a communication network is formed with stakeholders, such as the public, staff, emergency services, and government organisations, and the situation is subjected to constant review. Supposedly, the destination will now be in an increased state of readiness when the inevitable crisis or disaster appears. In essence, this appears to be a practical approach. However, there is one decisive factor which can rescind the most meticulously laid contingency plan, and that is that crises and disasters are naturally, characteristically and essentially unpredictable.

This unpredictability is, of course, noted in the literature. For instance, Pforr and Hosie (2007: 254) observe that 'these events [crises] are by their nature unpredictable in relation to their geographical location, timing and scale and hence provide unforeseen problems for tourism industry managers', while Ritchie (2004: 202) also refers to crises as 'indefinite, numerous, unexpected and unpredictable'. Faulkner (2001: 136) similarly comments on the 'sudden, unpredictable, catastrophic changes' which a disaster imposes on a destination whilst Cioccio and Michael (2007: 5) explain that 'many disasters remain attributable to random natural events that are beyond the capacity of

reasonable managers to predict'. Miller and Ritchie (2003: 169) provide an example by remarking on the unpredictability of the terrorist attacks in the United States and the FMD outbreak: 'Both FMD and the terrorism on 11 September 2001 could not have been influenced by the tourism industry, only responded to, while both events were entirely unpredictable.' In other words, they argue that the FMD outbreak and the events in the United States were unconventional, unavoidable and beyond the realms of realistic prediction. Furthermore, Sharpley (2005: 345), commenting on the devastating impacts of the Indian Ocean Tsunami of 2004, even questions the practicality of planning for such circumstances, arguing that 'it is unlikely that any set of guidelines, or, indeed, any established crisis management procedure could have adequately prepared a destination or region for the catastrophic events'.

Sharpley (2005) is suggesting that no form of established crisis planning could have adequately prepared a destination for an event on the scale of the Indian Ocean tsunami: '...the lack of warning, the speed with which the disaster unfolded and the sheer scale of destruction lay beyond most people's comprehension' (Sharpley, 2005: 346). Notwithstanding the fact that the Indian Ocean tsunami was exceptional in terms of its impacts, it could also be argued that risk assessments, scenario analysis and contingency planning are ineffective methods of preparation for the majority of tourism crises and disasters. This is because most 'tourism crises are unpredictable in their occurrence, evolution and impact' (Speakman and Sharpley, 2012: 2). Unpredictable in their occurrence refers to the form in which they occur, unpredictable in evolution concerns the difficulty in predicting the often complex path of the event, and unpredictable in impact relates to the fact that the impacts of a crisis or disaster will vary depending on its evolution, location and the timing. Therefore, it is highly unlikely that any scenario planning exercise could be sufficiently precise to predict the exact type of crisis, its evolution and its impacts. It will inevitably fail in at least one aspect, consequently limiting the effectiveness of the contingency plans which have been developed to suit a particular scenario. This suggests that, in a broad sense, the process of risk assessment, scenario analysis and contingency planning for what are, in essence, 'hypothetical' crises and disasters, is ultimately futile. Thus, the time and money that is spent planning for imaginary outcomes are potentially wasted because it is likely that the crisis or disaster which eventually occurs arrives will not be the one which was planned for.

Not only is risk perception, scenario analysis and contingency planning ineffectual in most cases, it can also lead to complacency (Evans and Elphick, 2005: 143), as governments and destination organisations relax in the false assumption that they are

prepared for every conceivable scenario. Later, they are taken by surprise when an unidentified situation occurs, or a situation fails to develop as they would expect, resulting in 'paralysis' and inaction which may, of course, impede recovery. For example, Paraskevas (2006) conducted research into events surrounding a food poisoning crisis which affected a hotel chain and discovered that previous simulation exercises had failed to assist those concerned. In the words of a CEO:

We had conducted a simulation exercise only five months ago. The scenario was similar but not in such a scale. Nevertheless, we all felt confident that although it was a highly unexpected situation, the plan was designed with such a situation in mind and we would be able to deal with it effectively. We did not expect that some people would not be able to cope and that some others would react in such a negative manner. (Paraskevas, 2006: 898)

In this case, even though scenario planning had identified the occurrence (a crisis caused by food poisoning) it failed because it did not accurately estimate the evolution of the situation and its impact. Scenario planning can also fail simply because the participants forget the details: 'simulation exercises require a great deal of time to prepare and are often disappointing as the participants quickly return to their daily work routines and do not give much further thought to crisis management, until the following year's exercise when the same, or similar, dysfunctions will be observed' (Robert and Lajtha (2002: 184,185).

Of course, it is sensible to establish protocol for 'likely', or 'probable' crises and disasters which occur in hazardous locations where specific events are liable to occur, usually in the form of natural disasters or terrorism. For example, destinations situated in the Gulf of Mexico should be prepared for the tourism impact of hurricanes and those in California must anticipate earthquakes. Meanwhile, the tourism industry of cities such as New York or London, which have experienced terrorist attacks, should be prepared for a future occurrence. Apathy towards known hazards can also result in future crises, as was evident in a Brazilian beach resort when local government officials tried to 'brush under the carpet' compelling evidence of pollution (Santana, 2003) and in New Zealand where a 'self-inflicted' crisis arose as a result of stakeholder inaction to changes taking place in a resort (Pike, 2007).

Therefore, while it is advisable to plan for a 'probable' crisis or disaster, unknown events are by definition difficult to predict, not just in the form of which they will occur but also in the path that they will take and the impacts that will be felt. For this reason, it

is suggested that risk assessment, scenario analysis and contingency planning for undetermined crises and disasters is usually 'expensive, time-consuming and, ultimately, fruitless' (Speakman and Sharpley, 2012: 2). The unpredictable evolution of crises and disasters is a significant characteristic, not just when considering the unpredictability of crises as it relates to pre-crisis planning, but in the way that it can severely frustrate managers attempting to follow a prescriptive guide.

2.5.3: The limitations of prescriptive models

The prescriptive models provided by Faulkner (2001), Ritchie (2004), and Page *et al.* (2006) presume that a crisis or disaster passes through a number of stages before reaching its climax and, as noted earlier, this is usually referred to as the lifecycle of the crisis or disaster. These stages, or phases, are convenient as they can be used as points of reference for academic study and analysis and as guidelines for a practitioner to follow while attempting to navigate their way through a crisis. However, by offering a 'series of remedial steps' (Scott *et al.*, 2007: 4) to manage a crisis or disaster, prescriptive models are failing to truly grasp the complexity which accompanies the evolution of the crisis as not only are crises and disasters unpredictable in that they can occur in a variety of forms, but they are naturally chaotic and complex, continually evolving and shifting throughout their lifecycle. Thus, suggesting that a crisis or disaster will follow a convenient, linear path is over simplistic and does not consider the intricacy that is inherent in a crisis or disaster situation.

Various case studies illustrate this argument. For instance, Miller and Ritchie (2003) applied Faulkner's (2001) framework to the FMD crisis and identified that the prodromal, emergency and recovery phases were happening simultaneously in separate regions, which would hinder any attempt by managers to use the framework as a strategic guide. This led them to conclude that Faulkner's (2001) framework has 'limited value in enabling event managers to steer a pre-determined course through such an unlikely, yet catastrophic event' (Miller and Ritchie, 2003:168). In addition, Henderson (2003b: 281) noted the absence of a pre-event and prodromal phase in an airline crisis and commented that 'crises do not always follow the clearly delineated pattern of theoretical models because of their unpredictability and the speed at which they unfold'. Likewise, Farazmand (2009: 402), examining the response to Hurricane Katrina, remarked that 'crises scramble plans of action and surprise everyone in and out of the field, as the dynamics of crisis constantly change and unfold on a daily and hourly basis, with unpredictable outcomes'. Furthermore, Paraskevas (2006) identified the limitations of a hotel chain's detailed crisis management plan when applied to a crisis provoked by food poisoning. The plan was found to be largely ineffective, as

illustrated in the following quote from an executive committee member.

The results were disappointing. This CMP (crisis management plan) was supposed to protect the chain and it failed. The level of detail in the planning was misleading. What looks good in paper does not really work in practice. What we thought that would be a co-ordinated response turned out to be a complete failure (Paraskevas, 2006: 898).

Paraskevas's (2006) case study not only illustrates the manner in which crisis and disaster evolution serves to thwart sequential crisis management models, but also demonstrates that, as mentioned above, a detailed plan can lead to complacency and also stifle innovation because the rigidity of the plan does not allow managers to deal with situations as they see appropriate. In fact, Paraskevas (2006: 895) recommends a complexity theory approach as an alternative to detailed crisis management plans: 'Seen from a complexity science perspective, it can easily be understood why the traditional approach to crisis response through very linear cause-and-effect CMPs [crisis management plans] is ineffective'.

Prescriptive, linear crisis plans are, therefore, regarded as a weakness of contemporary tourism crisis and disaster management models because they do not correlate with the reality of most tourism crises and disasters. Not only that, they hinder creativeness and self-organisation. Also serving to limit the usefulness of contemporary models are issues related to the size and scope of crises and disasters and the cultural context of crises and disasters. These aspects can be presented under the general term of a 'one-size-fits-all' approach.

2.5:4: One-size-fits-all approach

Contemporary tourism crisis and disaster management models are limited because they fail to consider what could be labelled the 'uniqueness' of tourism crises and disasters. The broad, one-size-fits-all approach, theoretically catering for all, tends to overlook the enormous variety of types of crisis and disasters and the variations in national culture, destination culture, destination structure and political structure which exist in the locations in which they occur.

2.5.4.1: Size and scope of tourism crises and disasters

Prideaux (2003: 296) suggests that one of the strengths of Faulkner's (2001) framework is 'its ability to be employed in a wide range of situations'. Miller and Ritchie (2003), however, applied the framework to the FMD outbreak and remarked that the framework appeared to be rather limited. As well as noting problems with the

prescriptive approach, they also commented on the difference in size and scope between the FMD outbreak and the Katherine flood (2003: 168): 'FMD was a disaster with broad temporal and spatial boundaries, while the Katherine floods were very concentrated in both time and space.' Consequently, Miller and Ritchie (2003: 150) suggest that 'although the outbreak fits the basic principles of Faulkner's (2001) model, the size, scope and subsequent management of the outbreak over an extended period suggests that although the model is useful, it has limited usefulness because not all disasters and crises are the same'. Zeng *et al.* (2005) agree that all forms of crises and disasters are distinct, and consequently events such as human and animal epidemics, natural disasters, war and terrorism have different effects and thus necessitate specific recovery strategies. Likewise, Carlsen and Liburd (2007: 268) point out that 'crises by their nature are geographically, demographically and temporally discrete...' thereby demanding unique approaches depending on the size and scope of the event.

It is, therefore, suggested that an attempt to use a standard, generic framework as a wholesale solution for the management of what is in reality a 'myriad' of possible crises and disasters, is impractical and unfeasible. In some specific contexts these models are of value but in complex circumstances, such as the FMD outbreak, the response requires a refined, explicit approach devised solely for the crisis or disaster that is occurring at that moment.

Furthermore, it is not only issues relating to the size and scope of crises and disasters that are of concern. Questions may also be raised when considering the tourism destination as an entity itself. That is, like crises and disasters, destinations themselves are distinctive and unique and, thus, what serves as a crisis management plan for one destination will not necessarily succeed in another. Consequently, just as the forms and nature of crises and disasters are highly variable, so too are the contexts in which they present themselves, as emphasised by Mistilis and Sheldon (2005: 11) who state that 'when a crisis occurs, the context differs by culture, organizational style and political structure'. Loosely following Mistilis and Sheldon's 'crisis contexts', the following sub-section considers how national culture, destination culture, destination structure and political structure (or more precisely the government's relationship with the tourism industry) place each crisis into a unique context, consequently further bringing into question the one-size-fits-all approach of contemporary crisis and disaster tourism management.

2.5.4.2: The contextual elements of a crisis or disaster

National culture

Hofstede (1983) has conducted extensive research into issues relating to national culture, demonstrating the often stark contrast in attitude which exists between people from specific nations. Individual cultures encompass a vast array of distinct values and beliefs which shape overall attitudes to life and work, with implications for tourism crisis and disaster management in particular. For example, it is logical to suggest that attitudes towards crisis planning differ depending on the cultural characteristics of a particular society. Gonzalez-Herrero and Platt (1998) became aware of this when investigating tourism crisis preparation in the United States and Spain. It was revealed that levels of preparedness were much higher in the former, with 78% of the US respondents confirming that they had a plan in place, compared with just 29% of those from Spain. Although doubts must be cast regarding the reliability of the US representatives (a common concern in the literature is the general lack of preparedness in the industry and, therefore, the 78% positive response may be optimistic), the research does serve to highlight the contrasting priorities afforded to crisis planning between two nations. Differences in crisis management planning are again evident in South East Asia where, in contrast to Faulkner's (2001) and Ritchie's (2004) recommendations, a reactive approach is given precedence over a proactive stance (Pforr, 2006). Indeed, de Sausmarez (2004) notes how some Asian countries prefer to deny that they are in crisis rather than 'lose face' with their rivals. Furthermore, following the 2002 terrorist attacks in Bali, a significant number of Islanders felt the need to take part in purification rituals before they could contribute towards the recovery strategy (Hitchcock and Putra, 2005). Accordingly, it strongly appears to be the case that 'national culture seems to act as a strong determinant of managerial ideology' (Laurent, 1983: 263) and, with this in mind, it is difficult to envisage how a generic tourism crisis management plan, with a particular worldview, could be appropriate for global use.

Destination culture

Ritchie and Crouch (2003: 145) insist that 'an attractive, well-functioning and highly competitive destination does not exist by chance. It requires a well-planned environment within which the appropriate forms of tourism development are encouraged and facilitated'. In other words, in order for a destination to improve its competitiveness, a distinctive culture must be nurtured in which stakeholders are encouraged and assisted in their efforts to make progress. To do this requires a governing body which has the pioneering wherewithal to instill a collective destination 'mind-set'; that is, one which embraces learning, collaboration and the sharing of the

knowledge so that the destination as a whole benefits and improves. This mind-set, or conviction, will be evident in the ideas, values, attitude, beliefs and patterns of behavior that are imparted amongst the industry's stakeholders. A destination which develops such a culture will be innately resilient and less vulnerable to negative change, and will also be receptive to crisis and disaster preparation. In other words a 'crisis culture' (Paraskevas, 2006: 902) will have been fostered, meaning the destination's stakeholders are aware of the possibilities and accept crises and disasters as inevitable facts of life. This is in contrast to those many destinations which languidly proceed and fail to develop a 'crisis culture'. Unsurprisingly, such destinations are likely to be indifferent to crisis and disaster management models and frameworks, thus implying that frameworks such as Faulkner's (2001) are failing to reach a large proportion of the world's tourism destinations.

Destination structure

Destination culture and destination structure are correlated; an innovative and resilient culture can be achieved by structuring the destination's stakeholders in a way that facilitates the activities which promote the spread of knowledge and, thus, increases the competitiveness and resilience of the destination. In reality, each tourism destination is structured or organised differently. Much depends on the significance of tourism to the government as disinterest results in a lack of ambition, communication and resources. A destination burdened with such a mind-set is unlikely to have the foresight necessary to redevelop its structure and incorporate crisis planning. Even if it did it would be compromised, as stressed by Mistilis and Sheldon (2005: 11): 'Pro-active planning and implementation may not help if communication styles are autocratic and the organizational culture is introverted'.

Political structure: the government's relationship with tourism

The relationship between government and tourism has implications for tourism crisis and disaster management which are not considered in current crisis management models and frameworks. It is assumed in the models that the government will routinely assist the tourism sector strategically and financially before, during and following a crisis or disaster, but often this is not the case. The differing objectives of government directly affect tourism policy. While for some governments tourism is a socio-economic necessity which demands intervention and protection, other governments demote its significance and prefer to not to intrude. As Kerr (2003: 28) explains, 'how governments use their powers, how they devise and implement policy, will depend upon many factors including their political culture; socio-economic issues; environmental outlook; the political and economic power holders/ brokers; and of course their perceptions of

the tourism industry on their economy or society. Furthermore such policies will be influenced by the political philosophies and ideological preferences of the government of the day, and the minister in charge, combined with the wider political environment in which they find themselves'. Moreover, government policy can antagonise the situation, as indeed occurred during the FMD outbreak in the UK and, to a lesser extent, in Mexico in the early stages of the H1N1 Influenza outbreak (see Chapters 5 and 6). In both of these cases, the government, intentionally or otherwise, chose to sacrifice the tourism industry for what they saw as a more important cause.

The contextual elements of a tourism crisis or disaster demonstrate that a 'standard' tourism crisis management model is not realistic, as national culture and the cultural and structural characteristics of a specific destination are inherently individual, encompassing complexities that are peculiar only to that particular location. In addition, each government has its priorities; some destinations are controlled by a powerful governmental body which offers the resources to develop, while other governments view tourism as a low priority and choose not to intervene. On occasion, even sympathetic governments relegate tourism beneath other concerns.

2.5.5: Lack of Coordination

A destination's competitiveness depends on how efficiently its components collaborate and coordinate to provide their tourism product (Fyall *et al.*, 2012). Coordination, in the context of tourism crisis and disaster management, occurs when 'expertise and resources are brought together to collaboratively develop a participatory and responsive process' (UNEP and CAST, 2008: 46). This process involves 'different organisations, government departments, emergency personnel, media organisations, and other stakeholders' (Ritchie, 2009: 148) and is a vital prerequisite to tourism crisis planning (Faulkner, 2001). However, Faulkner (2001: 139) does warn that 'it is not uncommon for competition and rivalry among these organisations to become a major impediment to both coordination and the ability of organisations to respond effectively'. For instance, Gurtner (2004: 64), investigating the Balinese recovery following the terrorist attacks of 2002, observes that 'while initial strategies developed after the terrorist attacks demonstrated a high degree of public consensus, political, economic and even personal differences soon worked to undermine the establishment of an effective, united partnership of stakeholders as recommended in the literature. Despite the shared objective of recovery and greater resilience, government, businesses, NGO's, and local community in Bali each seemed to have different concerns. Resultant crisis management plans, strategies, and associated promotional campaigns have been eclectic and far from holistic'. Therefore, regardless of the fact that coordination is

a vital aspect of tourism destination competitiveness in general and crisis and disaster management in particular, it is often compromised by common issues linked with the cultural, structural and political framework of the destination, thus representing a significant limiting factor for crisis plans which rely on coordination. That is, if the destination in crisis does not possess a culture and a structure which embraces collaboration then, consequently, poor communication and competition between its components will impede the coordination necessary to deliver an effective response against crises and disasters.

Fyall *et al.* (2012: 5) suggest that poor coordination can be resolved by adopting a perspective based on chaos theory: 'For collaboration generally, chaos theory provides an explanation for the means by which collaborative arrangements self-organise and self-renew according to their so-called "initial conditions". It also introduces elements of chance and opportunism into the analysis of collaboration processes, and attempts to explain the means by which such arrangements are able to re-establish stability, restructure themselves and attain a sense of order'. Unfortunately, however, chaos and complexity theory has been largely discounted by those preparing contemporary tourism crisis and disaster management models and frameworks.

2.6: Complexity and chaos theory

Faulkner and Valerio (1995) were the first to consider a tourism related issue from a chaos and complexity perspective. Suggesting that demand forecasting methods were limited, they proposed the adoption of a chaos and complexity approach. This was followed by Edgar and Nisbet (1996) who considered chaos theory within the realm of the hospitality industry and Russell and Faulkner (1997) who examined chaos and complexity theory in relation to tourism development.

McKercher (1999: 425) also contends that 'tourism essentially functions as a chaotic, non-linear, non-deterministic system. As such, existing tourism models fail to explain fully the complex relationships that exist between and among the various elements that constitute a tourism system'. Other academics have since agreed that chaos and complexity theory offers a potentially suitable theoretical foundation from which to research tourism and crises (Baggio, 2008; Faulkner, 2001; Paraskevas, 2006; Ritchie, 2004, 2009; Scott *et al.*, 2008; Speakman and Sharpley, 2012), arguing that a critical appraisal of the characteristics of destinations, crises and disasters from this alternative perspective, which seeks to explain apparent disorder, can be used to develop destination planning policies which transform the cultural composition of the destination and ultimately provide a more effective crisis response.

Nevertheless, despite the fact that chaos and complexity theory is regularly mentioned by tourism academics as a possible means of explaining the complexity of the tourism system, it appears that researchers are wary of utilising a theory that is still largely unproven in a tourism context (Farrell and Twining-Ward, 2003). Instead, preference is given to the use of concepts associated with classical science, a paradigm whose rise to prominence coincided with the industrial revolution and strongly influenced early organisation and management theorists including Max Weber, Henri Fayol, Frederick Taylor and Henry Gantt, and is still very much evident in modern-day organisations (McMillan, 2004). Faulkner (2000: 7) explains the theory associated with classical science: 'As a derivative of classical physics, the Newtonian/Cartesian paradigm propagated a reductionist worldview, whereby objects and events are understood in terms of their constituent parts and these are assumed to fit together like cogs in a clockwork machine. Every event is therefore determined by initial conditions that are, at least in principle, predictable with some degree of precision owing to the predominance of linear or quasi-linear relationships'.

Consequently, a chaos and complexity theory perspective is not considered in contemporary tourism crisis management models. While there is mention of chaos theory in Faulkner's (2001) seminal paper, referred to extensively in this chapter, suggesting that he did indeed support the idea of incorporating a chaos and complexity perspective into tourism management (see Faulkner, 2000, 2001; Faulkner and Russell, 1997; Russell and Faulkner, 2004), the linear construction of the framework contradicts the concepts associated with chaos and complexity and instead embraces the more traditional deterministic aspects of management. Thus, only Pareskevas (2006) and Speakman and Sharpley (2012) have explored chaos and complexity in relation to tourism crises in any detail, the former applying complexity theory to a case of food poisoning in a hotel chain as discussed earlier in this chapter and the latter examining how chaos theory could have improved the response to the H1N1 influenza outbreak in Mexico. The following chapter, therefore, will seek to explain the philosophy behind chaos and complexity theory and how it may be used to improve tourism crisis and disaster management.

2.7: Summary

This chapter set out to emphasise the various limitations of contemporary tourism crisis and disaster management models and frameworks. It began by exploring issues related to crisis and disaster definitions, followed by types and impacts of crises and disasters and the factors which contribute towards tourist risk perception. It was

important to consider Faulkner's (2001) framework in detail given its influence on and contribution to the study of tourism crisis and disaster management, although it was also necessary to review subsequent work that has built on, adapted or tested Faulkner's (2001) framework. Five weaknesses were found to be present in the contemporary crisis and management models, ranging from the unsuitable use of organisational management theory to the unlikelihood of successful coordination between stakeholders. The chapter ended by introducing chaos and complexity theory; this, and its relationship with tourism crisis and disaster management, will now be considered in detail in the following chapter.

Chapter 3

Tourism as a dynamic complex adaptive system

'Where chaos begins, classical science stops' Gleick (1987:3)

3.0: Introduction

The purpose of this chapter is to explore critically the fundamental elements of chaos and complexity theory and to determine the extent to which these principles could contribute to a more effective response to tourism crises and disasters. In so doing, it establishes a conceptual framework for the subsequent chapters in this thesis. The chapter considers how initial dissatisfaction with classical science theory led to the introduction of a systems theory approach to destination management; this in turn was criticised for retaining traditional principles, finally resulting in a chaos and complexity approach being suggested by some as a more appropriate to the challenges of managing tourism. It then considers the elements of chaos and complexity theory and how these may relate to tourism crisis and disaster management. Subsequently, the chapter envisages a 'learning tourism destination', the essence of a complex adaptive system, in which the principles of chaos and complexity theory contribute to a destination better prepared for crisis and disaster.

3.1: Towards a chaos and complexity perspective for tourism crisis and disaster management

This section briefly explores the transformation in conceptualising tourism that has led ultimately to the argument for a chaos and complexity approach to the study of tourism. The roots of this transformation in thinking lie in frustration with traditional science approaches; this stimulated interest in the development of tourism system models which sought to present a holistic view of how tourism functions. However, these models were themselves criticised for continuing to adopt a linear and deterministic methodology and, as a consequence, the adoption of a chaos and complexity theory perspective has been proposed as a solution.

3.1.1: Systems theory

In the 1920's and 1930's, researchers were becoming increasingly dissatisfied with classical science, suggesting that it failed to account for features of whole organisms (Ison, 2008). For example, Bertalanffy and Woodger (1933: 64) argued that 'since the fundamental character of the living thing is its organisation, the customary investigation of the single parts and processes cannot provide a complete explanation of the vital

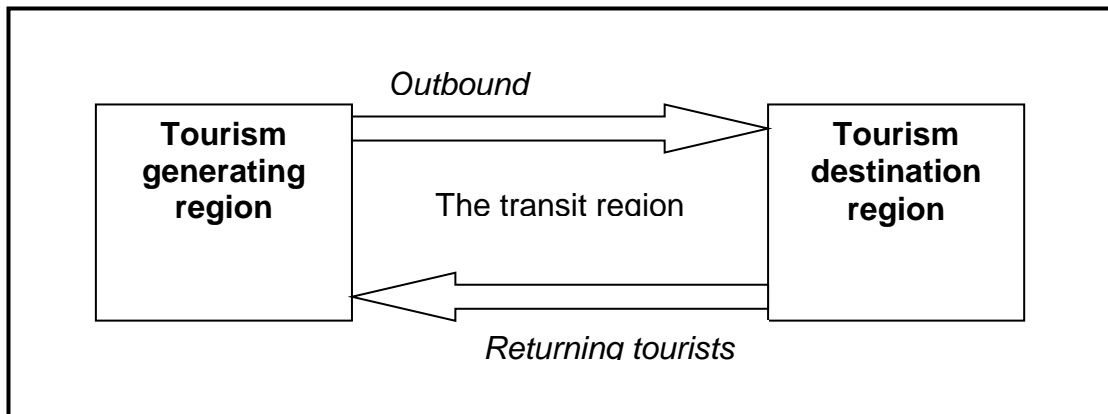
phenomena'. In other words, it was increasingly argued that traditional classical science failed to explain the behaviour of biological organisms; that is, complex systems which are not conveniently linear and predictable but, rather, function as a coordinated whole which is able to adapt to changes in its situation. Thus, an alternative perspective was deemed necessary and, hence, Bertalanffy and Woodger (1933) proposed a general systems theory which extended the concepts associated with biological organisms to complex systems of any kind. Checkland (2003: 49) explains that 'at the core of systems thinking is a concept which clearly derives very directly from our intuitive or casual knowledge of organisms: the concept of a whole entity which can adapt and survive, within limits, in a challenging environment. This notion of the 'adaptive whole' is the central image in systems thinking, and the systems movement can be regarded as the attempt to explore the usefulness of this particular concept in many different fields'.

Broadly speaking, systems theory represents a shift away from viewing the system as comprising a number of separate parts towards conceiving the system as a single, complete entity whose parts can only be fully understood in context of the whole, and not individually. This concept can be summarised by Aristotle's statement that 'the whole is greater than the sum of its parts'. Importantly, this shift in thinking was a step away from the 'cause and effect', linear processes that had been an inherent aspect of management and organisational structure since the beginnings of the Industrial Revolution. It offered an alternative, analytical viewpoint of an organisation, and broadened the theoretical scope by recognising the dynamic holism of the organisation and its propensity to adapt, evident when considering the interdependence of the internal workforce and their relationships with the environment and outside stakeholders. It also generated a pathway which ultimately led to a systems approach to tourism.

3.1.2: The tourism system

By imagining tourism as a 'system', it is possible to embrace the different elements which form the tourism industry and its wider environment and visualise the interconnectivity which flows throughout the system and its subsystems. Quite distinct models can be constructed this way. For example, Leiper (1979: 404) envisaged a tourism system which contained five elements: (i) tourists; (ii) the generating region; (iii) the transit route, (iv) the destination region and (v) the tourist industry which collectively operate in a broader physical, cultural, social, economic, political and technological environment. His tourism system model remains, perhaps, the most widely cited representation of tourism as a system (Figure 3.1).

Figure 3.1: The tourism system



Source: Adapted from Leiper (1990)

Alternatively, Gunn (1988) conceptualises the tourism system by differentiating between 'demand and supply'. The supply side comprises information, promotion, transportation, attractions and services whilst the demand side entails the population that has the interest and ability to travel. Furthermore, Mill and Morrison (1992) developed a marketing based model consisting of four components which they labelled as market, travel, destination and marketing. They compare their system with a spider's web; that is, the ripple effect which occurs when a web is touched can be compared to the way in which changes in one element of the tourism system affects other elements of the system. Generally, these approaches emphasise the broad, integrated nature of the tourism system; however, according to some commentators, they make a fundamental mistake by not recognising the unpredictable, dynamic nature of tourism (McDonald, 2009; McKercher, 1999).

3.1.3: Dissatisfaction with the systems approach

It could be assumed that the systems approach to tourism, 'following the ideas of general system theory' (Scott and Laws, 2005: 149), directly contradicts the views associated with classical science, not least because, as noted above, general systems theory evolved as a result of dissatisfaction and frustration with the more traditional science-based approach. However, according to McKercher (1999: 426), this is not the case:

Implicit in all of these models is the assumption that tourism is a linear, deterministic activity, whose orderly development can be controlled from above by 'planners'. These models try to reinforce the belief that tourism is predictable and that control over tourism is both possible and desirable, while a loss of control poses a threat to desired tourism outcomes. They argue that the failure

of the top down planners to control tourism is a function of a lack of data and the failure to dissect and analyse all the inter-relationships between tourism's component parts, rather than an inherent function of how tourism works.

McKercher's (1999) criticism is supported by several others. For example, Tinsley and Lynch (2001: 372) argue that 'these studies tend to perceive the tourist destination as a system containing a number of components such as attractions, accommodation, transport and other services and infrastructure. However, these systems tend to be static and without a dynamic element'. Alternatively, Farrell and Twining-Ward (2003: 279) lament the fact that researchers appear to focus on a 'core system' with impermeable boundaries and neglect the many other aspects of its environment which can affect the system. McDonald (2009: 458) also criticises the systems approach to tourism, referring to a persistent 'underlying theory of causality', while Russell and Faulkner (2004) comment on the impractical aspects of top-down management which is associated with systems theory.

Therefore, despite evolving from a paradigm which sought to contest the principles of classic science, tourism models created from systems theory remain criticised for the continuing utilisation of linear processes and the assumption that tourism challenges and processes, such as planning, development and sustainability, can be controlled by a top-down managerial approach which is directed towards stability within a closed system (Kline, 2007). Discontented with such an approach, a number of commentators, as already mentioned, have proposed the adoption of chaos and complexity theory, suggesting that it resolves the limitations associated not only with a classical science perspective but also those shortcomings related to the systems approach. The following sections, therefore, will now explore the concepts of chaos and complexity theory and how it can be applied to organisations, tourism systems and, in particular, the management of tourism crises and disasters.

3.2: An introduction to chaos and complexity theory and complex adaptive systems

This section considers briefly the terms chaos theory, complexity theory and complex adaptive system before the following section explores their characteristics in greater detail.

3.2.1: Chaos theory

As with the terms crisis and disaster discussed earlier, there is no universally accepted definition of chaos theory (Farazamand, 2003). However, it suffices to cite Levy (1994: 168), who defines chaos theory as 'the study of complex nonlinear dynamic systems'.

In fact, the term 'chaos' is rather deceptive as, beneath the complexity, instability and turmoil often apparent in non-linear, complex systems, there lies an underlying order (Murphy, 1996). That is, patterns emerge from the chaos through the adaptive interactions between the components of the system which, although unpredictable, are nevertheless familiar and result in the system re-emerging 'in an improved state of being' (Russell and Faulkner, 1999: 411). Indeed, it is this promise of discovering uniformity and structure in the midst of a complex episode that has kindled interest in chaos theory (Levy, 1994).

3.2.2: Complexity theory

As with chaos theory, a universal definition of complexity theory does not exist and the terms chaos and complexity are used interchangeably in the literature. Ritchie (2004, 2009) and Russell and Faulkner (1999) prefer not to differentiate between the concepts while McKercher (1999) regards them as cousins. Nonetheless, a number of commentators insist that chaos theory and complexity theory are not identical (Axelrod and Cohen, 1999; Haynes, 2001; Mitleton-Kelly, 1998). For example, McMillan (2004) believes that chaos theory is the forerunner to complexity theory and Kernick (2004) explains that while both involve the study of dynamic non-linear systems, chaos theory takes the form of quantitative inquiry whereas complexity theory is the qualitative study of insights which have been derived from chaos theory.

Importantly, in the context of this study which challenges traditional tourism crisis management plans, Stevenson *et al.* (2009: 21) state that 'complexity science works on the assumption of non-linearity, which implies that knowledge is local and contextual. This raises questions about the extent to which researchers can develop models that have meaning outside the local context. It implies the rejection of those models that claim to be universal and that are reductionist, simplifying processes and systems in order to understand them'.

This study will adopt the term complexity theory, as it is understood that the 'broadness' of the term complexity theory already encompasses chaos theory; that is, chaos theory is 'subsumed conceptually within complexity' (Smith, 2005: 23). Thus, complexity theory includes all aspects of chaos theory and more besides. For instance, Stacey *et al.* (2002) believe that complexity theory is a combination of chaos theory, dissipative structures theory and complex adaptive system theory. A dissipative structure is essentially a self-organising structure (Tao-Wang, 2002), whilst a complex adaptive system will now be described in detail.

3.2.3: Complex adaptive systems

McMillan (2008: 60) describes complex adaptive systems as 'complex dynamical systems which are able to learn and adapt to changes in their circumstances and their internal and external environments. They are able to modify their behaviours and to reconfigure their internal structures'. The capacity to learn and adapt is what makes them distinct from complex systems; for instance, the weather is a complex system, unable to learn and adapt, whereas biological systems, social systems, organisations, economies and ecosystems are complex *adaptive* systems, able to adapt and modify their behaviour when necessary (McMillan, 2008).

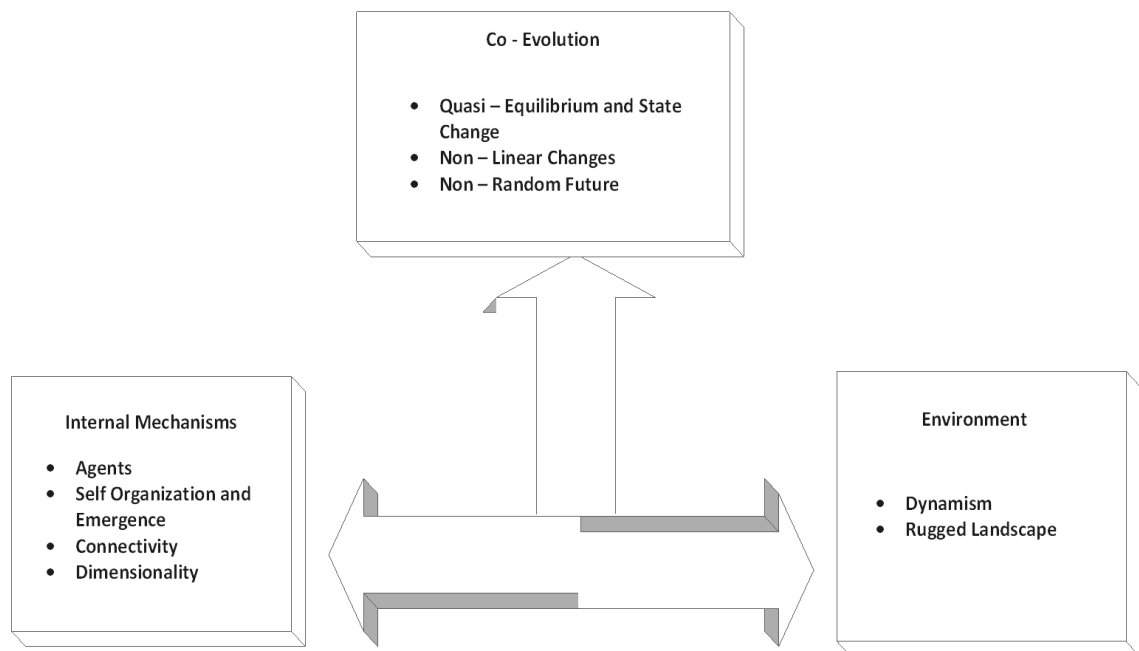
For some, tourism can be seen as a complex adaptive system (see de Sausmarez, 2007; Farrell and Twining-Ward, 2005; Miller and Twining-Ward, 2005; Schianetz and Kavanagh, 2008; Stevenson *et al.*, 2009). For example, Baggio (2008: 4) states that 'the tourism sector, as an economic activity, shares many of the characteristics that are used to define a complex adaptive system. Accidents of history, positive feedback, increasing returns, social multipliers, lock-in effects, non-linearities, path dependency, evolution, self-organisation, emergence, outbreaks and catastrophes are all phenomena that have been used to explore social interaction in the emerging field of complexity. These phenomena have direct applications to tourism'. These phenomena, or underlying dynamics of a complex adaptive system, will be considered in more detail below.

3.3: Properties of complex adaptive systems and features of chaos and complexity theory

Chaos and complexity theory has aroused the interest of a broad range of disciplines including mathematics, meteorology, biology, physics, chemistry, economics and marketing. The literature of each provides specific individual interpretations regarding the various properties of complex adaptive systems, often simply referred to as elements of chaos and complexity theory, focusing unsurprisingly on those which are of particular interest or relevance to that particular field. The field of organisational management is no different, and scholars such as Thietart and Forgues (1995), Morgan (1997), Nonaka (1988), Brown and Eisenhardt (1998), Lewin and Regine (2000), Pascale *et al.* (2000), and Wheatley (1999) have utilised chaos and complexity theory in order to advance the understanding of organisational dynamics (Stacey, 2007). Tourism academics have also begun to discuss these concepts to better understand how the destination functions as a complex adaptive system (see Baggio, 2008; Stevenson *et al.*, 2009).

The following sections will investigate the properties of complex adaptive systems from both an organisational and destination crisis and disaster management perspective. In this case, the same concepts which apply to organisations are also relevant to destinations, as they are both being analysed as complex adaptive systems (a destination adopting a chaos and complexity approach would become integrated and cohesive, to an extent homogenous, thus avoiding the problems associated with the range of diversity among stakeholders and their receptiveness to planning described in section 2.5.1). A model provided by Choi *et al.* (2001), which exhibits the underlying dynamics of a complex adaptive system, will provide a framework for the discussion, with the concepts of edge of chaos, butterfly effect, bifurcation, cosmology, self-organisation, emergence and strange attractors being singled out for particular analysis (see Figure 3.2).

Figure 3.2: Underlying dynamics of a complex adaptive system



Source: Choi *et al.* (2001)

3.4: Co-evolution, incorporating quasi-equilibrium (edge of chaos) and state change, non- linear changes and non-random future

This section considers the concepts related to co-evolution. It will first consider the quasi-equilibrium state, or the edge of chaos as it will be referred to, which is the state in which complex adaptive systems function most effectively. In order to position itself in the edge of chaos state, the tourism destination needs to embrace the concept of the 'tourism learning destination' which will provide the methods and the structure to function as a complex adaptive system on the edge of chaos. It is suggested that a

destination management organisation is the body most suited to coordinate this process, providing it meets certain criteria. In so doing, it facilitates the flow of information necessary to prepare for crises and disasters and quickly form an appropriate response once they occur.

Secondly, this section will explore the concept of non-linear changes, or the butterfly effect as it is better known. The butterfly effect defies prediction since minute changes in initial conditions can culminate in unprecedented change, thus discrediting the traditional planning notion that what works for one will work for all. Furthermore, it is related to various tourism crises and disasters, as seemingly unconnected events result in crisis for the industry. Nonetheless, there can be positive butterfly effects as well as negative, and both can be either nurtured or prepared for by the tourism industry. Despite the unpredictability associated with the butterfly effect, the concept of non-random futures, the third element falling under the umbrella of evolution, points to the possibility of broad prediction, in that repeated patterns are evident in complex adaptive systems.

Co-evolution:

Co-evolution is a term which was first used to describe the interaction between hugely distinct butterfly and plant species which had evolved over time to share a mutual ecological relationship (Erlich and Raven, 1964). Another biological example can be found in the co-evolution pattern found to exist between the viceroy butterfly and the monarch butterfly. Apparently, the sweet-tasting viceroy is regarded as a delicacy by birds, while the rather unpleasant tasting Monarch is ignored. As a result, the Viceroy has evolved to change its wing pattern to resemble that of a monarch so as to escape the attention of hungry birds looking for a treat (Holbrook, 2003: 22).

The concept has since been adopted by organisational theorists, as co-evolution 'refers to the simultaneous evolution of entities and their environments, whether these entities be organisms or organisations' (Porter, 2006: 479). For example, as one element of a complex adaptive system gains an advantage, the other elements co-evolve in order to compare and compete which, in turn, encourages the original element to further evolve to heighten its profile on what has been labeled the 'fitness landscape' (Kauffman and Weinberger, 1989). This consequently results in a situation where complex adaptive systems operate far from equilibrium and stability; rather they are operating on the 'edge of chaos'.

3.4.1: Quasi-equilibrium or the edge of chaos

Choi *et al.* (2001: 356) declare that a complex system normally sustains a 'quasi-equilibrium state', which is a balance between stability and chaos, sometimes labelled the 'edge of chaos'. This is the 'place' or 'zone' where 'optimal system behavior occurs' (Carroll and Burton, 2000: 333). For example, the concept is evident in ecological systems; 'systems operating in the vicinity of the edge exhibit wild bursts of creativity and produce new and novel behaviors at the level of the whole system. Whirlpools spring forth, birds flock in patterns, and whole populations of species ebb and flow accordingly' (McElroy, 2000: 196). A useful analogy is provided by Kauffman (1995) who uses water to explain the concept: Water exists as ice, liquid, or steam. As ice it is too rigid to support life. As steam it would also be unable to do so either. Therefore, the most appropriate form in which to exist is as liquid. At its liquid state, water provides a system which can support life and an ecological community. The liquefied state relates to the edge of chaos element, as this is the optimum moment for creativity, advancement and emergence to an improved form of existence. Thus, operating too close to equilibrium is considered unhealthy for a system as it can allow for stagnancy and possible extinction; on the other hand, operating close to non-equilibrium is perilous and can also lead to termination.

3.4.1.1: Organisational management and the edge of chaos

Organisations can also increase their potential and competitiveness by being situated in the edge of chaos zone. As McMillan and Carlisle (2007: 584) explain, 'one can consider organisations as existing along a continuum ranging from complete chaos to mechanistic stability. In between chaos and stability, organisations can operate as complex adaptive systems. If they become too chaotic they can disintegrate, but if they operate too far from the edge of chaos they are in danger of ceasing to exist. At the 'edge of chaos' they are at their most innovative, flexible and adaptive'. According to Stacey (2007), it is of the upmost importance how this state of paradox is managed, as under the correct circumstances innovation and creativity will indeed occur. Consequently, the key to organisational success, longevity and ultimately crisis and disaster resilience lies in facilitating an edge of chaos organisational climate.

Organisational management theory offers suggestions for managers hoping to achieve this balance between inertia and chaos. For example, Pienaar *et al.* (1999) propose seven principles for managers to adhere to, which include: (i) encourage team players rather than individuals; (ii) facilitate processes rather than tasks; (iii) build strong relationships with internal and external stakeholders; (iv) adopt participative management; (v) foster relationships as they are more important than detailed

planning; (vi) suppose that the whole of the organisation is more than the sum of its parts; (vii) facilitate improvisation and flexibility.

3.4.1.2: Tourism and the edge of chaos

Tourism destinations can also benefit from being positioned in the edge of chaos zone, as the process would serve to synchronise the destination's components and establish methods which would improve the overall competitiveness of the destination and its resilience to crisis and disaster. This will be discussed shortly, but first it is necessary to consider which tourism organisation should be responsible to implement such measures.

3.4.1.3: The Destination Management Organisation and the edge of chaos

The World Tourism Organisation (2004: 3) states that destination management organisations (DMOs) are responsible for the marketing and the management of destinations. DMOs generally fall into the category of:

- (i) National tourism authorities or organisations responsible at a national level (NTO)
- (ii) Regional destination management organisations responsible for a particular geographical region (RTO)
- (iii) Local destination management organisations responsible for a small region such as a city or town (LTO)

They may take the form of organisational bodies, such as private organisations, government departments, chambers of commerce or convention and visitor bureaus but, whatever their configuration, all have a number of roles to fulfil, which, according to Bornhurst *et al.* (2010: 573), include:

- (i) Coordination: To manage and harmonise the elements which make up the destination's tourism sector, 'so as to achieve a single voice for tourism'.
- (ii) Leadership and advocacy: 'A visible entity that draws attention to tourism'.
- (iii) Development: The development of tourism facilities and events to promote the competitiveness of the destination.
- (iv) Visitor services: Pre-visit information and during the visit information.

- (v) Liaison: Liaise with external organisations such as wholesales and travel agents.

Importantly, in the context of this thesis, the literature also suggests that DMOs have a major role to play in the management of tourism crises and disasters. For example, two decades ago, Cassedy (1991) remarked on the importance of NTOs during tourism crises, while both Ritchie *et al.* (2003) and Armstrong and Ritchie (2007) have quoted Henderson (1999c: 108), who posits that: 'National Tourist Organisations, with their responsibility for general destination marketing, research and development, have an important role to play in the process of travel and tourism crisis management, representing and acting on behalf of the industry as a whole'. Likewise, Page *et al.* (2006) suggest that it is the duty of NTOs to assume a leadership role in the planning and management of crises and disasters, while Paraskevas and Arendell (2007), writing within the context of terrorism and its effect on tourism, firmly believe that the NTO and RTO has a role to play in all of Faulkner's (2001) tourism disaster lifecycle phases. Furthermore, Young and Montgomery (1998) present an overview of a DMO crisis management plan, and there are several case studies which document the role played by DMOs in tourism crises and disaster (Armstrong and Ritchie, 2007; Carlsen and Hughes, 2003; Frisby, 2003; Henderson, 1999c, 2003c; Hopper, 2002; Huang and Min, 2002; Hystad and Keller, 2008; Prideaux, 2003).

There is an assumption among many academics that the DMO has general responsibility for the development and sustainability of a destination and, as such, will take the lead role during a crisis or disaster. However, according to Pennington-Gray *et al.* (2010: 248), the traditional role of a DMO lies in marketing and public relations and, therefore, 'the development and maintenance of a comprehensive tourism crisis management plan is a relatively new responsibility of DMOs'. Indeed, the research of Pennington-Gray *et al.* (2010) highlights that, in Florida at least, DMO crisis management plans are either poor or do not exist at all. This indicates that many DMOs, at least on the regional and local level, are still relatively unprepared for a crisis situation.

This could be because many DMOs are unsure what their role encompasses, perhaps because until recently they have been generally referred to as 'destination marketing organisations', rather than 'destination management organisations'. As Ritchie and Crouch emphasise (2003: 73), 'the concept of the DMO where the 'M' emphasises total 'management' rather than simply 'marketing' is a somewhat recent conceptualization...'. Consequently, this could have led to an element of confusion

regarding the concept and purpose of a DMO, which, accordingly, leads to a scenario in which members of the DMO are unsure of their function, as in whether they should concentrate on marketing or managing the destination. This uncertainty could also extend to the destination's stakeholders who may not recognise and acknowledge the DMO as the organisation to take the lead in crisis and disaster planning, implying that the DMO's calls for coordination and inter-organisational collaboration in times of crisis may ultimately fall on deaf or sceptical ears.

The question therefore arises as to whether it is unrealistic to assume that the 'destination management organisation' will naturally take the lead and be recognised by all stakeholders as the body to guide a destination through its crisis or disaster, as seems to be 'accepted' in much of the literature. It appears that there is no definite answer to this question and it must be accepted that, in certain situations, DMOs may be skilful and adept at managing crises while in others they may not. The point to be aware of is, just as crises and disasters differ significantly, so too do DMOs vary greatly in their agendas, structures and capabilities. Some DMOs may be adept in their domain while others may not and then again it may all depend on the type of situation they are faced with. Generally speaking, for a DMO to be recognised and credited as the appropriate organisation to take the lead in crisis situations there are several specific criteria which it should meet.

The DMO needs to be recognised and accepted by all stakeholders; destination crisis management hinges on the ability of an organisation to take the lead. To do this, the organisation's authority must be acknowledged by the destination's stakeholders, as ultimately the stakeholders will evaluate the DMO. However, with such an array of stakeholders as in the tourism system, it can be difficult to reach agreement (Bornhurst *et al.*, 2010). Noting such difficulties, Bornhurst *et al.* (2010) conducted a study to determine the factors which contributed to a DMO's success, according to stakeholders. Four key themes were identified:

- (a) Internal stakeholder relations: The ability to interact effectively with all stakeholders, as failure to interact with all components can result in feelings of marginalisation.
- (b) Operational activities: Marketing, management and, to a lesser degree, product development.
- (c) Resources: Funding and personnel and, to a lesser extent, destination knowledge. The DMO leader should possess 'political astuteness,

visionary skills, and a dynamic personality'. (Bornhurst *et al.*, 2010: 586) and there should be a team of knowledgeable executives.

- (d) Performance measures: DMO performance should be measured by the number of visitors to a destination. The need to show proven results which reflect on the DMOs activities.

Consequently, for the DMO to be readily accepted by stakeholders it needs to prioritise the above themes, act upon them and communicate the following issues to its stakeholders.

Firstly, the jurisdiction of the DMOs activities needs to be established. As mentioned earlier, some authors have identified NTOs as having a significant role to play in tourism crises and disasters (Armstrong and Ritchie, 2007; Cassedy, 1991; Page *et al.*, 2006; Paraskevas and Arendell, 2007; Ritchie *et al.*, 2003). At the same time, Hystad and Keller (2008) and Pennington-Gray *et al.* (2010) have conducted research regarding regional and local level management organisations in British Columbia and Florida respectively, which indirectly raises the important question of which type of DMO – national, regional or local – should assume responsibility for a particular crisis situation. Hystad and Keller (2008:159) suggest that it depends on the scale of the crisis or disaster: 'At a larger scale, the destination marketing organisations may be replaced with other regional or national tourism organisations. It is important to recognize that all disasters are different and that destinations have to adapt their response to each specific disaster'. This infers that small, destination specific crises will primarily be dealt with by its LTO or RTO, but if it threatens to get out of hand, or the crisis or disaster covers a wider area, then the NTO will take control.

Secondly, it should be established whether the DMO is a public or a private sector organisation because, as noted by Ritchie and Crouch (2003:185), management decisions can differ depending on the motives of the organisation. Public sector orientation may emphasise public service and community development, while a private sector environment may focus on 'cost controls and accountability'.

Thirdly, managers should be fully informed regarding current technological practices and knowledge transfer processes, they should be expert in tourism crisis and disaster management and organisational learning should be an imperative for them (Pennington-Gray and Pizam, 2011), factors which will become especially relevant in

the following sections. As such, DMOs can act the role of knowledge brokers or spanners and facilitate the flow of communication during crises (Blackman *et al.*, 2011). Therefore, in summary, a DMO which can fulfill these requirements is the body most suited to implement the measures that are necessary for a destination to become resilient to crises and disasters. These measures include facilitating the methods that will place the destination into the edge of chaos zone. This can be realised by embracing the concept of the 'learning tourism destination'.

3.4.1.4: Learning tourism destination

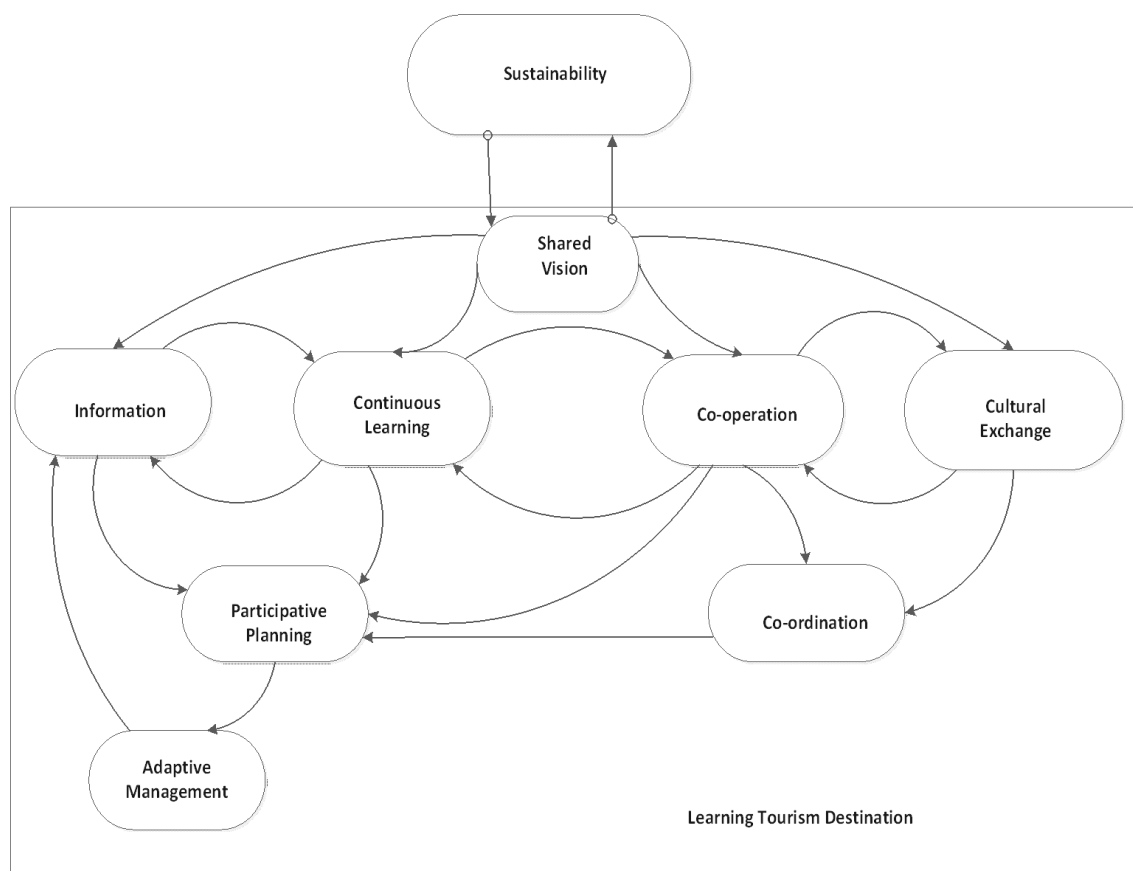
There is a certain affinity between theory associated with learning organisations and that related to complex adaptive systems (Cohen and Sproull, 1996). That is because they share the same characteristics of unpredictability, emergence, encouragement of considered risk-taking, co-evolution, social ecosystem, self-organisation, networks of relationships and inter-dependence (Mittleton-Kelly, 2003) and, even though a learning organisation cannot be directly compared with a complex adaptive system existing on the edge of chaos (McMillan, 2008), the theories associated with each can work in unison. For example, in the context of this thesis, managers wishing to place an organisation into the edge of chaos zone, thereby stimulating the self-organisation that will improve competitiveness and resilience, could do so by embarking on procedures which transform it into a learning organisation. So, for instance, they could focus on principles related to individual learning, team learning, and a 'shared organisational vision' which serve to push the organisational system in the direction of the edge of chaos zone. These efforts will prove beneficial when the organisation arrives at this zone, as it is at this critical point where learning encourages self-organisation and emergence emerges extemporaneously (Fisser and Browaeys, 2010), demonstrating how organisational learning and chaos and complexity theory are able to complement each other.

The goal, according to Schianetz *et al.* (2007: 1486), is to expand the concepts associated with organisational learning to create a learning tourism destination, similar in notion to a tourism cluster (see Cunha and Cunha, 2005; Jackson and Murphy, 2002; Nordin, 2003; Novelli *et al.*, 2006). Schianetz *et al.* (2007: 1486) recognise the non-linear, complex and dynamic nature of tourism and are aware that tourism destinations are considerably different from the organisations in which 'learning' concepts have previously been applied, but nonetheless, they stress that applying the 'LO [learning organisation] concept' would allow stakeholders to improve their own skills, which would in turn increase their understanding of: (i) how destinations function; (ii) how to improve marketing potential; (iii) how to adapt to changing environments;

and (iv) how risks can be reduced and counteracted. Therefore, 'the goal has changed from achieving sustainable tourism destinations to creating tourism organisations within a destination which are adaptive to change and capable of learning how to improve sustainability continuously' (Schianetz *et al.*, 2007: 1486).

A framework presented by Schianetz *et al.* (2007: 1494) consists of eight interlinked elements: shared vision, information, continuous learning, cooperation, cultural exchange, participative planning, coordination and adaptive management, all included to highlight the interconnectivity that is necessary to form a shared vision and ultimately sustainability and resilience (see Figure 3.3).

Figure 3.3: Learning tourism destination framework



Source: Schianetz *et al.* (2007)

Meanwhile, Moles-Moles (2003) developed a conceptual framework which consists of 'three dynamic wheels' acting together to facilitate the establishment of a 'complex and dynamic system', which the European Commission (2006) later utilised in the preparation of a comprehensive handbook entitled *Innovation in tourism: How to create a tourism learning area*. It stresses the involvement of all stakeholders in the form of cooperation, partnerships and networking, coordinated and directed by a 'leader' that

acts as a focal point for the learning area. It emphasises the need to improve knowledge transfer between educational and research organisations and the tourism industry by developing learning, consultancy and support for regional stakeholders and the continued improvement of employee skills, organisational structure and the working environment 'in order to foster better entrepreneurial quality, innovation, competitiveness and sustainability' (EC, 2006: 34). This will be further discussed in section 3.5.4.3.

DMOs can, therefore, follow a number of directives in an attempt to turn their respective destination into a learning region or area. In so doing they are also indirectly positioning the destination into an edge of chaos state, as described by the organisational management literature, subsequently better prepared to confront a crisis or disaster when one inevitably occurs. Of course there are challenges to this. One problem is that organisational learning approaches have typically been centered on the individual organisation and not a group of diverse organisations, while another difficulty is that of acceptance of such ideas in the fragmented, competitive tourism industry (Cooper, 2006). The practical realities of implementing a learning destination will be considered in the conclusion; however, despite potential obstructions, Fyall *et al.* (2012: 21, 22) stress that 'the increasing uncertainty in the wider environment and overall lack of linearity and stability merely enhance the need, and benefits to be achieved from, mediated intra- and inter-destination collaboration' and that an appreciation of tourism's chaotic nature by public and private stakeholders can serve to demonstrate the advantages to be gained from a collaborative approach.

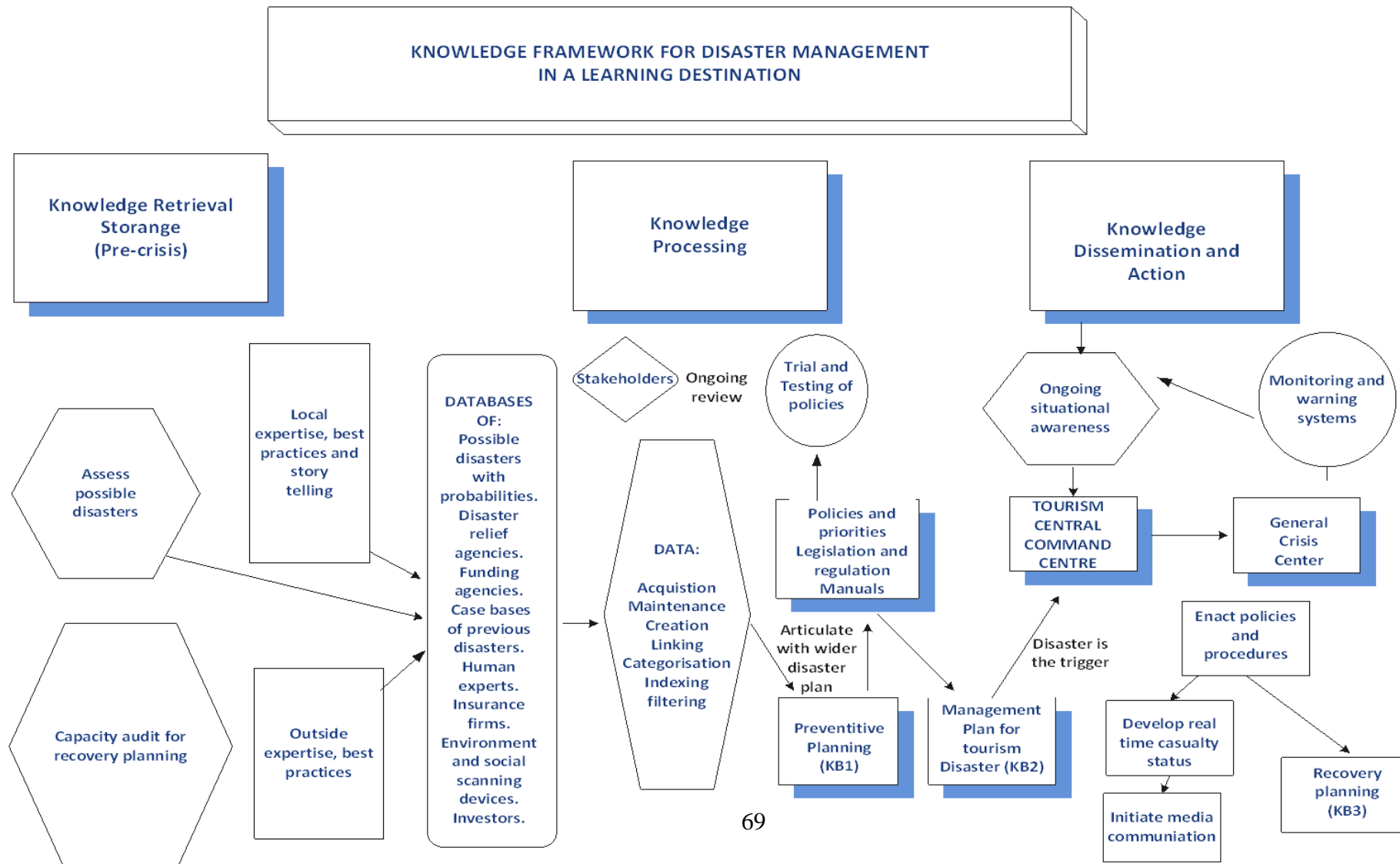
3.4.1.5: The learning tourism destination and tourism crisis and disaster management

It has been established that the transformation of a tourism destination into a learning tourism destination would enable it to enter the desired edge of chaos zone, a place in which the characteristics of innovation and robustness occur spontaneously, thus making the destination resilient to negative changes in its environment. Nonetheless, it is still necessary for enterprises to prepare specifically for crises and disasters by collecting related knowledge, storing it, processing it and finally distributing it for preventative planning purposes, action during the crisis, and for reflection following the crisis (Mistilis and Sheldon, 2005). 'Adoption of such an approach would lead to the development of a learning destination, one with a dynamically changing knowledge base to prevent tourism disasters and maximize the required response, thereby facilitating a speedy recovery to normal activity for the tourism industry and the host community' (Mistilis and Sheldon, 2005: 7).

Ritchie (2009), acknowledging that little research has taken place concerning organisational learning and tourism crises and disasters, suggests that destination management organisations, government agencies and other industry associations can act as intermediaries to facilitate the collection, storage and distribution of this knowledge. Blackman *et al.* (2011: 346) insist that destination management organisations adopt the role of 'knowledge brokers' or 'spanners' (intermediaries) in facilitating the movement of crisis related knowledge across organisational boundaries by means of a technological web-based 'codification based strategy', or/and by a dialogue led 'personalisation-based strategy'.

At the same time, Mistilis and Sheldon (2005) suggest an 'interconnected 'knowledge base' as a means of storing information related to each phase of the disaster (they refer to the stages in Ritchie's (2004) framework) which is available to all enterprises. The knowledge is obtained and stored in the pre-crisis stage and is administered and distributed during the crisis or disaster. Mistilis and Sheldon (2005) posit that this approach will enable a destination to become a learning destination that has the ability to either prevent or effectively manage crisis and disaster situations (Figure 3.4).

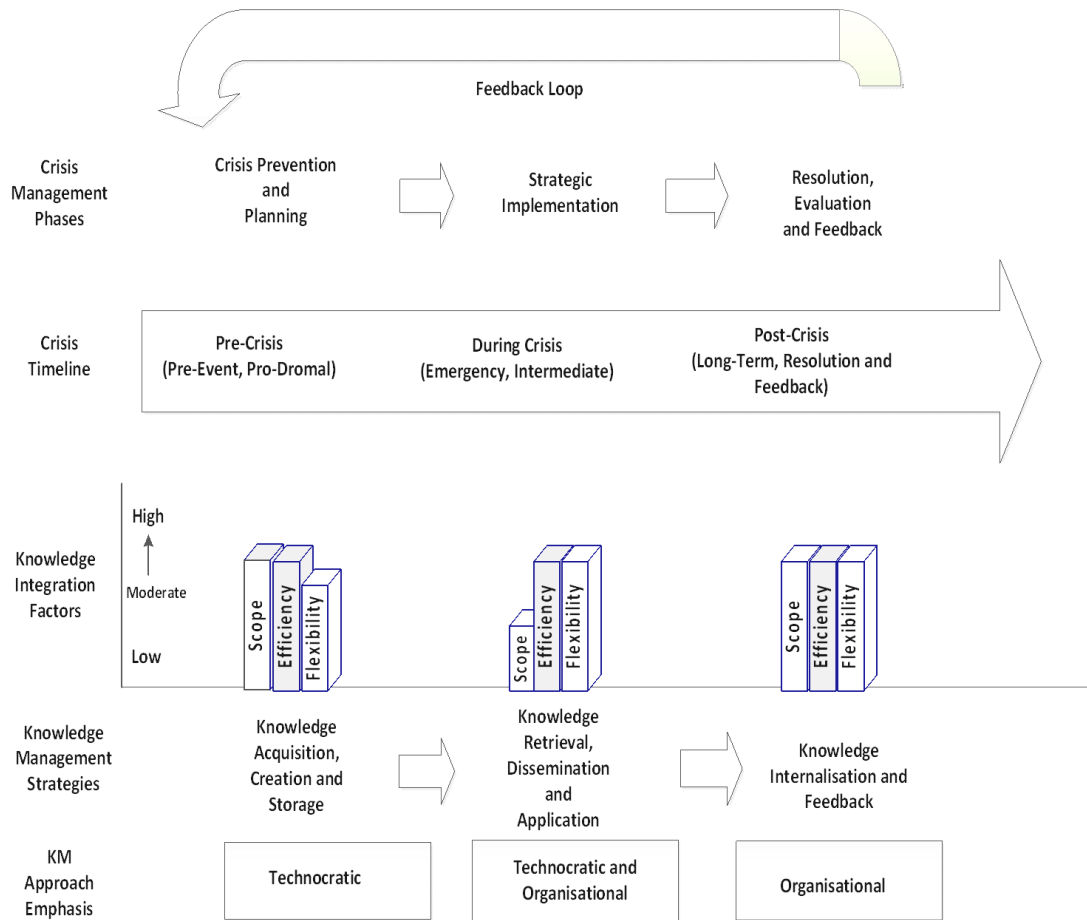
Figure 3.4: Knowledge framework for disaster management in a learning destination. Source: Adapted from Mistilis and Sheldon (2005)



Similarly, Racherla and Hu (2009: 566) suggest the combination of 'knowledge management processes (acquisition and storage; retrieval, dissemination, and use; and evaluation and feedback), while taking into account the scope, efficiency and flexibility of each phase of the crisis (see Figure 3.5). For example, the *pre-crisis* is the time for knowledge acquisition and storage in the form of a 'technographic' approach which utilises technological devices such as virtual databases; the *emergency and intermediate* stage demand knowledge retrieval, dissemination and application and are bolstered by both a technocratic and organisational approach which combines the use of technology and networks and communities; the *final stages* of the crisis and the subsequent *resolution, evaluation and feedback* phase of the crisis merits an organisational approach which permits knowledge internalisation and feedback. The feedback loop then connects the knowledge gained from the crisis experience with pre-crisis knowledge acquisition, creation and storage.

It is, therefore, argued that a DMO wishing to ensure the ongoing effective management of its destination and, in particular, in preparing for crisis and disaster situations, would be advised to partake in the action necessary to place the destination into what is known in chaos and complexity theory as the edge of chaos state, rather than exist in a traditionally highly controlled planned environment because, as Baggio (2008: 16) observes 'we have seen that long-term planning is almost impossible'. A way of obtaining this desired state of affairs for the whole destination is for the DMO to promote the concepts of a learning region approach which should equip the industry with a myriad of businesses which are resilient, flexible and innovative and adaptable in the face of changes. As well as achieving the edge of chaos state which will improve sustainability and competitiveness, this will also facilitate the flow of information needed in preparing and then coping with a crisis or disaster situation, evident in the models provided by Mistilis and Sheldon (2006) and Racherla and Hu (2009). The frameworks provided by these researchers emulate a complex adaptive system; that is, a complex adaptive system absorbs information from its environment and stores it as knowledge to be used to support future action (Amagoh, 2008).

Figure 3.5: Conceptual framework for knowledge based crisis management



Source: adapted from Racherla and Hu (2009)

3.4.2: State change and non-linear changes

Complex adapt systems can react disproportionately to changes within the system's environment. That is, minute fluctuations in the system's environment can lead to large-scale, unpredictable, non-linear changes, whilst significant variations in the environment can result in modest change. This phenomenon is commonly known as the butterfly effect.

3.4.2.1: The butterfly effect

The butterfly effect (otherwise referred to as 'sensitive dependence on initial conditions') suggests that an occurrence as trivial as the flapping of a butterfly's wings could serve to create the conditions which cause a tornado in a distant location (Lorenz (1963). It underlines the fragility of the system and its sensitivity to external influences and how a small, seemingly innocuous, incident can trigger a set of reactions which ultimately result in significant changes. Sometimes it can be difficult to determine the

precise incident which provoked a change, which has obvious implications for the 'cause and effect' concept of traditional management theory (McMillan, 2008). Sometimes only in hindsight might the 'triggers' which catapulted the changes be identified. The collapse of the Soviet Union and the fall of the Berlin wall are useful examples of this. Bunce (1999, xi) notes that 'the collapse of communism was both abrupt and long in the making', meaning that although the end may have been rather sudden and unexpected, events dating back to the 1960's (possible butterfly effects) suggest weaknesses which at the time were not so apparent.

Essentially, the butterfly effect defies prediction. The incident, if repeated, would produce a different outcome and would do so repeatedly, thus rendering traditional deterministic management beliefs redundant. Even by recreating the initial starting conditions of a situation or experiment in a complex system numerous times, the end results would constantly differ. A useful analogy is the pinball machine. Although the ball is shot from the same position it never follows the same trajectory. Minute differences in initial positioning and interactions with other elements of the system, in this case the playfield mechanisms, result in a unique route being taken every time the ball is played. This has important ramifications for organisations, as it appears that managerial decisions and strategy are apt to follow hugely unpredictable and unrepeatable paths each time, just like the ball in a pinball machine.

3.4.2.2: Organisational management and the butterfly effect

The butterfly effect influences an organisation in various ways. It stresses that managers should view the organisation as a whole rather than as separate components, as a minor change in one part of the organisation can result in a major disturbance throughout. It therefore challenges the notion of predictability and long-term planning, as sudden change can disrupt carefully planned strategic initiatives. Furthermore, sensitive dependence on initial conditions challenges the notion that what works for one will work for all, so consequently initiatives which have proven successful under certain circumstances for one organisation may not be effective for another organisation in a distinctive context. This brings to mind the criticism expressed in the previous chapter relating to the one-size-fits all approach of contemporary tourism crisis and disaster management models. That is, each organisational crisis has its unique set of initial conditions and, consequently, events will follow exclusive paths and thus conclude with distinctive outcomes, rendering a one-size-fits- all approach unsupportive and possibly obstructive.

3.4.2.3: Tourism and the butterfly effect

It is important to be aware that there are two forms of butterfly effect in tourism, one positive and the other negative (although often the negative butterfly effect will eventually have a positive impact). An example of a negative butterfly effect is a random, unpredictable act of nature which culminates in a crisis or disaster situation for a destination. For instance, the Indian Ocean tsunami of 2004 in which an earthquake off the coast of Sumatra was the 'trigger' which then generated a huge tsunami which killed thousands of tourists and locals and culminated in a crisis for many destinations in the affected regions. This is an example of a butterfly effect of external origin. Alternatively, Pike's (2007) report of a 'self-inflicted' crisis in New Zealand which was provoked by an insufficient stakeholder response to the changes in the macro-environment is an example of an internal trigger, as the butterfly effect in this case was a consequence of initial management errors. Meanwhile, an example of a positive butterfly effect could be a certain innovative action taken by an entrepreneur that results in progressive change for a destination (Russell and Faulkner, 2004). This success can then breed further success, as McKercher (1999: 429) explains: 'Destinations that achieve a level of success are more likely to become more attractive to both consumers and investors, which in turn, engenders even more interest in the destination area'. Past actions of an entrepreneur can also contribute to the 'lock-in' effect in which tourists repeatedly return to a popular destination, despite the initial changes brought about by the entrepreneur having become long since redundant (Faulkner, 2000). As indicated earlier, often negative butterfly effects can eventually result in positive change for the destination because they compel change in the destination. This was apparent in the tourism region surrounding Mount Saint Helens (Murphy and Bayley, 1989; Beattie, 1992) and following the Katherine Floods in Australia (Faulkner and Vikulov, 2001).

3.4.2.4: Tourism crisis management and the butterfly effect

The decision to adopt a 'learning destination' perspective is itself a 'trigger' for positive change, as the destination will benefit from the consequences of this decision in the form of increased resilience. Once it becomes a learning destination, the DMO can further harness methods to strengthen the destination's resistance to negative butterfly effects, such as a crisis or a disaster, and to encourage and amplify positive butterfly effects which lead to an enhanced tourism product. For example, the DMO can encourage inter-organisational crisis and disaster workshops; ideas expressed and cultivated at these meetings encourage the development of crisis planning initiatives to be shared on the destination's information network.

3.4.3: Non-random futures

Despite being unpredictable, the future of a complex adaptive system is not entirely random. That is, certain patterns tend to emerge which are recurrent. An example of this is the weather (which is a complex adaptive system). Distinct patterns emerge throughout the world and so while precise predictions cannot be made in advance, people have a general idea of what is possible, even months in advance. For example, tourists planning to visit the UK in December will be aware that it is likely to be cold, although this could range from a relatively mild ten degrees Celsius, to a potentially freezing minus fifteen degrees Celsius. Thus, there is a general pattern but it cannot be accurately predicted. The same notion applies to tourism crises and disasters; that is, tourism tends to be resilient. Therefore, although it cannot be known how, where and when a tourism crisis or disaster is going to occur, taking into account past patterns and outcomes of these events it can be reasonably assumed that recovery (for the destination as a whole, it does not apply to individual enterprises) will be fairly quick and it will be complete. The job of the DMO, therefore, is to facilitate this process with the least negative consequences possible.

3.5: Internal mechanisms, incorporating agents, self-organisation and emergence, connectivity, dimensionality

This section considers the concepts referred to as the internal mechanisms of a complex adaptive system. It will explore the element of bifurcation, which is the moment in which the system changes following the butterfly effect. It is associated with the emergency stage of a crisis and is frequently accompanied by episodes of cosmology, when uncertainty and panic are prevalent among the system's agents. Complex adaptive systems are composed of various agents who, although in competition, are united by a collective sense of purpose which is in the interest of the system. This shared belief is an example of the concept of strange attractor, which serves to 'pull' the system, through the process of self-organisation, towards an improved state of being, known as emergence. The process of self-organisation can be facilitated by structuring the destination in a form that allows for connectivity (cohesion among agents) and dimensionality (autonomy), thus encouraging the flow of information and knowledge. McMillan's (2002) Fractal Web and Moles-Mole's (2003) Tourism Learning Area Process model provide examples which demonstrate how tourism destinations can be organised so as to allow for the development of complexity principles and for the destination to function as a complex adaptive system on the edge of chaos.

3.5.1: Agents

Complex adaptive systems are 'neural-like networks' (Uhl- Bien and Marion, 2009: 631) comprised of a diverse, heterogeneous range of agents. The constant interaction of these agents and the passing of resources and information defined by their individual schemas serve to produce complex and adaptive behaviour patterns (Boal and Schultz, 2007). In organisational theory, agents can be individuals, teams (perhaps crisis management teams), departments or organisations (Choi *et al.*, 2001). In a tourism destination, they may be individuals, teams, tourism businesses or tourism organisations. Because of the 'relative autonomy' and 'loose coupling' of the agents, complex adaptive systems are more effective in dealing with surprising changes than 'hierarchical, centrally-controlled systems' (Pina *et al*, 2010: 89) as they can quickly adapt to the situation at hand, solve problems with creativity and also learn from challenges.

Agents are 'cooperatively bonded by common purpose or outlook' (Uhl-Bien *et al.*, 2007: 302); therefore, although they may be in competition with each other, the success of the system to which they belong to is vital to their own unique aspirations and so the common goal is for the survival and progression of the complex adaptive system as a whole. This is done through co-evolution and the process of self-organisation and the subsequent emergence which arises from this. Self-organisation and emergence are key themes of chaos and complexity theory and are a consequence of the process of bifurcation (Sellnow *et al.*, 2002).

3.5.2: Bifurcation

Bifurcation, also known as 'phase transitions', is referred to as the 'threshold of critical instability' (Paraskevas, 2006: 894). It is the 'flashpoint of change' (Sellnow *et al.*, 2002: 271), where a system transmutes and will either begin its demise or emerge into a higher order through the process of self-organisation. Bifurcation can be the result of the butterfly effect, as explained by Obelensky (2010: 78): 'If the butterfly effect describes the input of the process (i.e. a small change to a situation sensitive to initial conditions), a bifurcation is often (but not always) what happens downstream'. The changes evoked by bifurcation are said to be either 'subtle', 'catastrophic' or 'explosive' (Abraham, 1995) and one bifurcation can lead to further bifurcations. Seeger (2002: 332) compares organisational crises to the concept of bifurcation: 'According to the vocabulary of CT [chaos theory], organisational crises are points of system bifurcation or radical change where a system's direction, character, and/or structure is fundamentally disrupted and departs from the previous path'. It is a critical moment for the organisation, as it will either mean its demise or a movement towards a higher state

of being, much depending at this point on the history of the organisation and how it copes with accompanying episodes of cosmology.

3.5.3: Cosmology

More specifically, bifurcation compares with the emergency phase of a crisis. During this stage, when the system is thrown into disequilibrium, an element labeled 'cosmology' can be present. Cosmology describes the feelings of helplessness and confusion present among the system's agents: 'A cosmology episode occurs when people suddenly and deeply feel that both the sense of what is occurring and the means to rebuild that sense collapse together' (Weick, 1993: 634). Cosmology illustrates the limitations of scenario planning and the resultant contingency plans, exemplified by the words of a CEO recalling a crisis:

We had conducted a simulation exercise only five months ago. The scenario was similar but not in such scale. Nevertheless, we all felt confident that although it was a highly unexpected situation, the plan was designed with such a crisis in mind and we would be able to deal with it effectively. We did not expect that some people would not be able to cope and that some others would react in such a negative manner. (Paraskevas, 2006: 898)

Paraskevas *et al.* (2013) suggest that in instances such as these, the plan fails because managers are informed by 'procedural knowledge': 'This knowledge involves steps on 'how to' respond to a particular crisis with clearly articulate tasks regarding the crisis itself...' (Paraskevas *et al.*, 2013: 140). Because of the limitations associated with prescriptive plans discussed previously, knowledge of this type is somewhat restrictive and does not allow for the flexibility and invention needed during a crisis or disaster. Therefore, Paraskevas *et al.* (2013: 140, 141) propose that procedural knowledge should be supplemented with 'behavioural knowledge', which is 'shaped both formally through the knowledge of organisational crisis management standards, procedures and mechanisms and informally through social interactions with peers, customers, suppliers and partners'. Consequently behavioural knowledge combines explicit, codified knowledge which a person has received during training, and tacit, individual knowledge (Paraskevas *et al.*, 2013).

Another quote from a DMO Director of Communications illustrates the concept:

You cannot say to the members of your staff 'this is what we want you to do or not do'. You have to say 'this is how we want you to be'. If you give them a solid

foundation with a few simple rules, it will be easier to assimilate them into the culture you want to create (Paraskevas et al., 2013: 141.)

It is, thus, imperative that methods are adapted to impart the 'correct' forms of knowledge to stakeholders so that a 'crisis culture' can be developed which is prepared for bifurcation and avoids cosmology. This will now be considered in more detail in the context of a tourism destination.

3.5.3.1: Tourism crisis and disaster management, bifurcation and cosmology

The concept of bifurcation also applies to a tourism destination in the emergency phase of a crisis or disaster (Speakman and Sharpley, 2012). For example, Faulkner and Russell (2004) equate the moments following the terrorist attacks in the United States and the Bali bombings of 2002 with bifurcation and cosmology.

When a crisis or disaster affects a tourist destination, it is crucial that cosmology episodes are not allowed to disable or limit the response. Therefore, DMOs need to ensure that a 'crisis culture' is created so as to 'enable their prevention, improve crisis response and accelerate crisis recovery' (Paraskevas et al., 2013: 145). It is suggested that a strong relationship exists between organisational culture and crisis and disaster response (Pauchant and Mitroff, 1992), which can be translated to destination crisis response. A destination which is 'crisis averse' rather than a 'crisis prone' (Pareskevas and Altinay, 2012: 7) will be prepared and expecting change in the form of crises and disasters and consequently episodes of cosmology should be sparse.

Part of the process of instilling a crisis culture among the destination's managers and employees includes the preparation of a repository of crisis related knowledge which is formed as a result of intra- and inter-destination crisis workshops and seminars. This repository includes crisis management strategies and policies, which needs to be detected and utilised quickly when a crisis occurs. Mistilis and Sheldon's (2005) 'learning destination' approach, referred to above, proposes the formation of a pre-crisis management plan with contributions from all stakeholders. The emergency (bifurcation) stage is the trigger for the activation of this plan, which is coordinated by a previously established tourism central command centre. Similarly, Racherla and Hu (2009), also positing a 'learning' approach, suggest that previously stored stakeholder knowledge is retrieved and disseminated when the crisis or disaster impacts upon the destination. In order to counter poor communication and limited coordination at the emergency phase, possibly as a consequence of cosmology, they recommend an

efficient knowledge distribution system: 'In this regard, a primary requirement is to create situational awareness so that the relevant stakeholders can make sense of the specific problem with appropriate guidance' (Racherla and Hu, 2009: 566, 567). The negative impacts of bifurcation and the effect of cosmology can be restricted if a crisis culture has been established in a destination, in which stakeholders have been made aware of crises and disasters and have subsequently developed coordinated methods of crisis response. This results in the process of self-organisation, described by Sellnow *et al.* (2002: 2720) as 'the outgrowth or consequence of bifurcation' from which 'new forms, structures, procedures, hierarchies, relationships, and understandings emerge' (Seeger, 2002: 333) from the impacts of the crisis and disaster.

3.5.4: Self-organisation, emergence and strange attractors

Self-organisation:

Chaos and confusion reign during episodes of bifurcation and cosmology and, at this fragile stage, there are two possible outcomes for the complex adaptive system: it may either break down completely leading to its unfortunate demise, or it may emerge from the turmoil into a more complex, improved state of being. The ability of the system to do the latter depends on its ability to adapt to its changing environment through 'the emergent characteristics of self-organisation' (Schneider and Somers, 2006: 355). Described by Seeger (2002: 332) as the 'antithesis' of chaos, self-organisation is channeled by inner guidelines rather than by external directions, in that the system is capable of organising itself without outside intervention. It is defined by Cilliers (1998: 90) as 'a property of complex systems which enables them to develop or change internal structure spontaneously and adaptively in order to cope with, or manipulate, their environment'. An example of self-organisation is the manner in which birds flock during flight. In order to establish the correct speed and direction, each bird intuitively flies towards the centre of the flock, imitating the rate of velocity of those birds around them and also leveraging a prudent distance between themselves and their counterparts (Kelly, 1994). Thus, the distinct action of individual birds following simple rules without being led by a coordinating body results in complex group behavior. This process is known as emergence.

Emergence:

The notion of birds flocking during flight epitomises the notion, typically associated with emergence (and complex adaptive systems in general), that the whole is more than the sum of its parts (see Holden, 2005; Farsari *et al.*, 2012). It 'refers to the arising of novel and coherent structures, patterns, and properties during the process of self-organisation in complex systems' (Goldstein, 1999: 49). Harkema (2003: 343) likens

the concept of emergence to a game of chess: 'The rules underlying the game are quite straightforward and simple, the outcome however depends on the people playing, their mental models, the strategies they will pursue in response to the strategies chosen by each individual player and how these strategies in turn affect their own and the other player's mental models. A game of chess shows how interactions feed back and forth on each other: players, strategies, mental models, and the course of the game. The process is not only hugely complex, but the outcome is also unpredictable: it emerges bottom-up'. Therefore, the path which the chess pieces will take throughout the game cannot be predicted in advance, just as the path and formation of the flock cannot be predicted, despite sharing similar starting positions. Nonetheless, the flock of birds and the game of chess can be predicted to fall within certain boundaries as similar patterns of behavior will continue to occur. The force which enables this to happen is called the strange attractor.

Strange attractors:

Described as being similar to a 'gravity pit' (Uhl-Bien and Marion, 2009: 640), attractors serve to 'pull' the system's agents in a particular direction which influences their behaviour. There are three types of attractor. The fixed point attractor maintains a system's stability and can be imagined as a straight line on a graph; the cyclic attractor keeps a system in a cyclic shape and can be seen as a regular, waving line. Meanwhile, the *strange* attractor illustrates chaotic situations. In this case, the lines on the graph will reflect this chaos by constantly meandering; however, the meandering will always be within a certain boundary (Murphy 1996).

The existence of the strange attractor allows for 'orderly disorder' (Tsoukas, 1998: 299). That is, even within the chaos there is an underlying order, as the system continually evolves towards the strange attractor. This reoccurring pattern consequently allows for a broad scope of predictability; for example, despite being unable to predict the exact movement of the pieces in a game of chess or the precise formation of a flock of birds, the movements and outcome will be familiar to what has occurred before. These reoccurring patterns are expressions of self-similarity and are an example of the fractal properties of the strange attractor. Fractals are 'everywhere in the natural world' (McMillan, 2008: 52); mountain ranges, coastlines, river networks, snowflakes and fern leaves are all examples of fractals. They are 'irregular patterns or shapes' which repeat 'themselves up and down a scale of size (McMillan, 2008: 53). In organisations it implies 'the occurrence of similar patterns across organisational levels' (Black *et al.*, 2007: 425). In other words, it refers to the use of decentralised, flexible and autonomous units throughout the organisation, which allow the system to

quickly adapt to change. An example is McMillan's (2002) Fractal Web, which will be described in detail shortly.

Strange attractors can usually be easily identified but, occasionally, they can be rather more obscure. As Seeger (2002: 334) explains, 'sometimes such order is evident, as when forests rejuvenate in familiar ways following a fire. In other cases, the attractors are more subtle such as the family, community, and economic ties that lead to rebuilding a city following a natural disaster or the entrepreneurial drive that encourages a company to rebuild after a fire'. In the latter case, the strange attractor is manifested as a common sense of purpose, a convergence of 'agents' who desire a similar outcome and unify so as to their collective goal. This common belief is repeated in a fractal manner throughout the company, at all levels, in a combined, cohesive effort to reach the desired outcome.

Importantly, complex adaptive systems can self-organise, form patterns and emerge without centrally controlled intervention (Anderson, 1999). Indeed, the ability to create coherent order from disorder has obvious implications for the management of tourism destinations in times of crisis.

3.5.4.1: Self-organisation and emergence in tourism

Self-organisation and emergence have been evident following numerous tourism crises and disasters and, according to McKercher (1999: 427), helps to convey the point that the majority of tourism systems manage to 're-emerge in an even more competitive manner' following the event. It serves to demonstrate that 'tourism seems to exhibit little resistance but considerable resilience' (Zeng *et al.*, 2005: 307). For example, Baggio (2008: 20) notes that 'recent events such as the 9/11 and Madrid terrorist attacks, the Bali bombings, the SARS epidemics, the Iraq war, and others, have greatly affected the sector. However, almost unpredictably, the recovery to pre-event levels (see, for example, the tourist arrivals statistics provided by the WTO) was accomplished in a relatively short period of time, typically a few months'.

While tourism destinations usually offer substantial resilience, crises and disasters still generate extensive negative impacts for the destination's stakeholders; consequently, methods to diminish these effects are a priority. Self-organisation not only contributes to the destination's resilience, but also enables the destination to flourish and prosper as a result of the positive changes which occur following a crisis or disaster (Seeger, 2002). The onus is on creating the conditions necessary so that tourism enterprises have sufficient flexibility to self-organise according to the demands

of the particular crisis or disaster, and to adapt to changes and solve problems as and when they appear. Before considering methods to facilitate self-organisation and emergence in a tourism destination, it is first necessary to contemplate how it can be done in an organisation.

3.5.4.2: Self-organisation and emergence in organisations

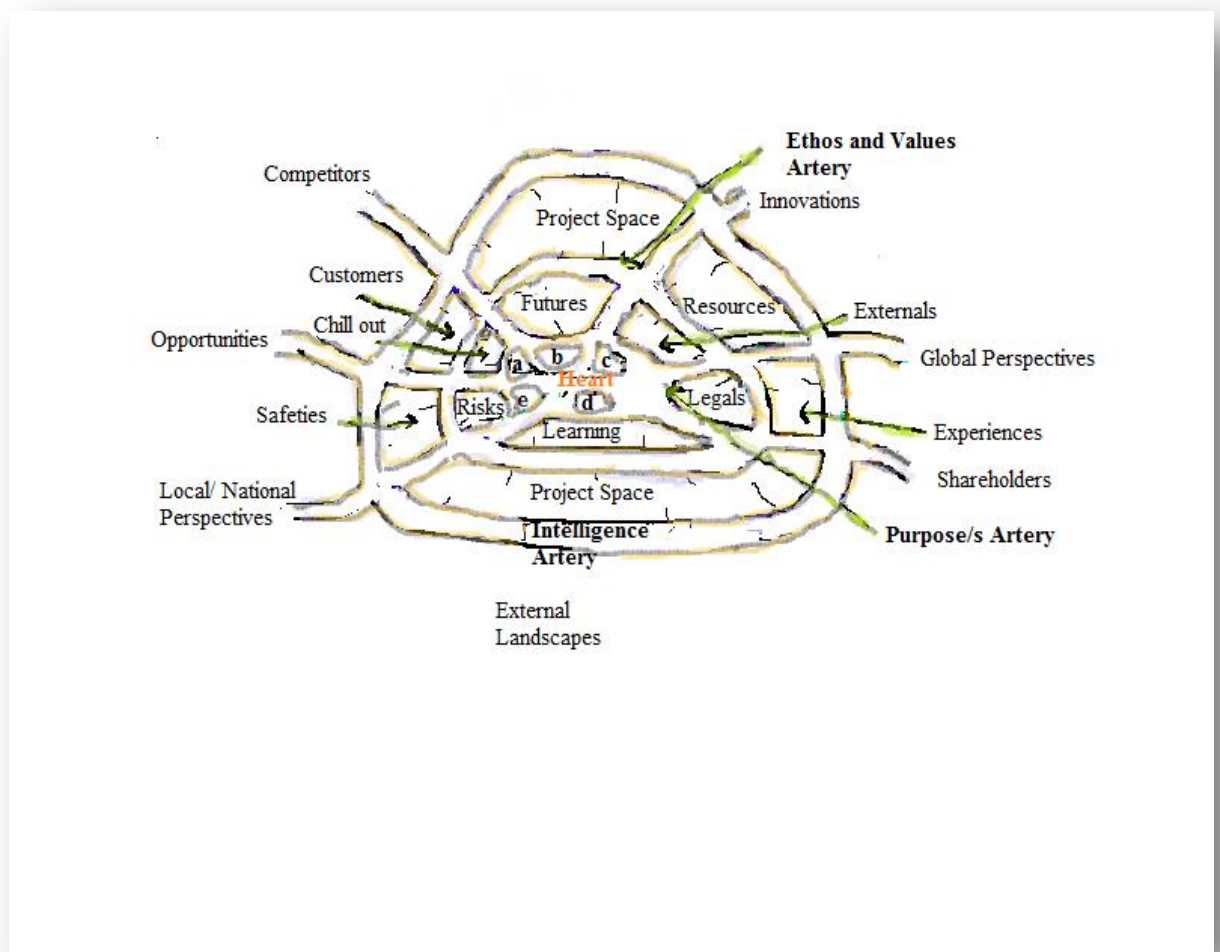
Managers can facilitate the processes of self-organisation and emergence by structuring and designing the organisation so as to allow for flexibility and the flow of information (Hunt *et al.*, 2009). Pina *et al* (2010: 291), likewise, recommend a simple infrastructure 'designed to facilitate emergence and self-organisation' which contains simple rules to 'facilitate the creation of fluidity', adaptive leadership which 'best fits the architecture of simplicity that facilitates emergent self-organisation' and empowerment to replace 'detailed job descriptions and high levels of formalization' with increased capacity for individual and grouped agents. McMillan (2002) insists that the organisational structure is based on complexity principles and thus proposes the Fractal Web (Figure 3.6 below).

McMillan describes the Fractal Web:

The model was devised by thinking about biological structures and the human circulatory system and its fractal dimensions in particular. The model has non-linear interconnectedness; is designed to allow a constant flow of energy and matter (information) throughout its whole; and via its 'arteries' is open to its environments, all characteristics of a self-organising system as described by Capra (1996). The structure allows for employees to respond spontaneously to events guided by an overall sense of direction and purpose - key attributes of self-organisation... (McMillan, 2002: 131)

The model is designed in the image of an authentic complex adaptive system. It uses fractal patterning as its framework in that the pattern formed by the arteries can be repeated on distinct scales. For example, the pattern inside the purpose artery (a,b,c,d,e) is echoed within the ethos and values artery albeit on a larger scale and this process continues on an even grander scale inside the intelligence artery.

Figure 3.6: The Fractal Web



Source: adapted from McMillan (2002)

As McMillan (2002: 132) explains: 'Every level is imbued with the ethos and values of the organisation. All participate in learning; speculate on the future; take risks with ideas and experimentation; work on projects; consider external aspects; share and value experience/s and knowledge; draw on resources; observe safety and legal requirements; embrace customers; and chill out and relax from time to time'.

The central heart area of the web represents the organisation's principles and it is essentially the core which 'nourishes' the rest of the organisation. It consists of five inner chambers (a,b,c,d,e) in which the arteries meet and it is surrounded by the purpose/s artery. The ethos and values artery leads directly into it the purpose artery. The inner chambers of the web, the purpose artery and the ethos and values artery encourage self-organisation and their general function is to provide the impetus which drives the organisational values (which can be equated with strange attractors) throughout the system (McMillan, 2002).

The arteries collect information from the external environment and this is then pumped around the structure so that learning can occur and knowledge be developed. The smaller vessels also help by transporting internal responses and information from around the organisation into the larger arteries to be distributed throughout the system. The number of vessels increases according to the size of the project space to ensure a continual flow of information (McMillan, 2002).

The spaces and chambers dedicated to specific themes are dynamic rather than static in that they can adjust their size in response to the organisation's needs. As one space increases in size the other reduces or extends its boundaries, and this is done without having to undo the structure of the system or concede any of the organisation's principles: 'It is a structure that is flexible and responsive to the needs of the organisation with changeability built into the design. In other words, its shape is able to ebb and flow as it renews itself' (McMillan, 2002: 133).

McMillan (2002) finally reveals that the organisation's members purposefully move around the spaces to ensure that knowledge is passed around and flows throughout the whole system. Some specialists also have a precise role of 'ensuring that 'nutrition' flows through a particular artery and the spaces adjacent to it' (McMillan, 2002: 134). Leadership will be dispersed throughout the system although occasionally specialists will be required for specific needs until that necessity has been resolved.

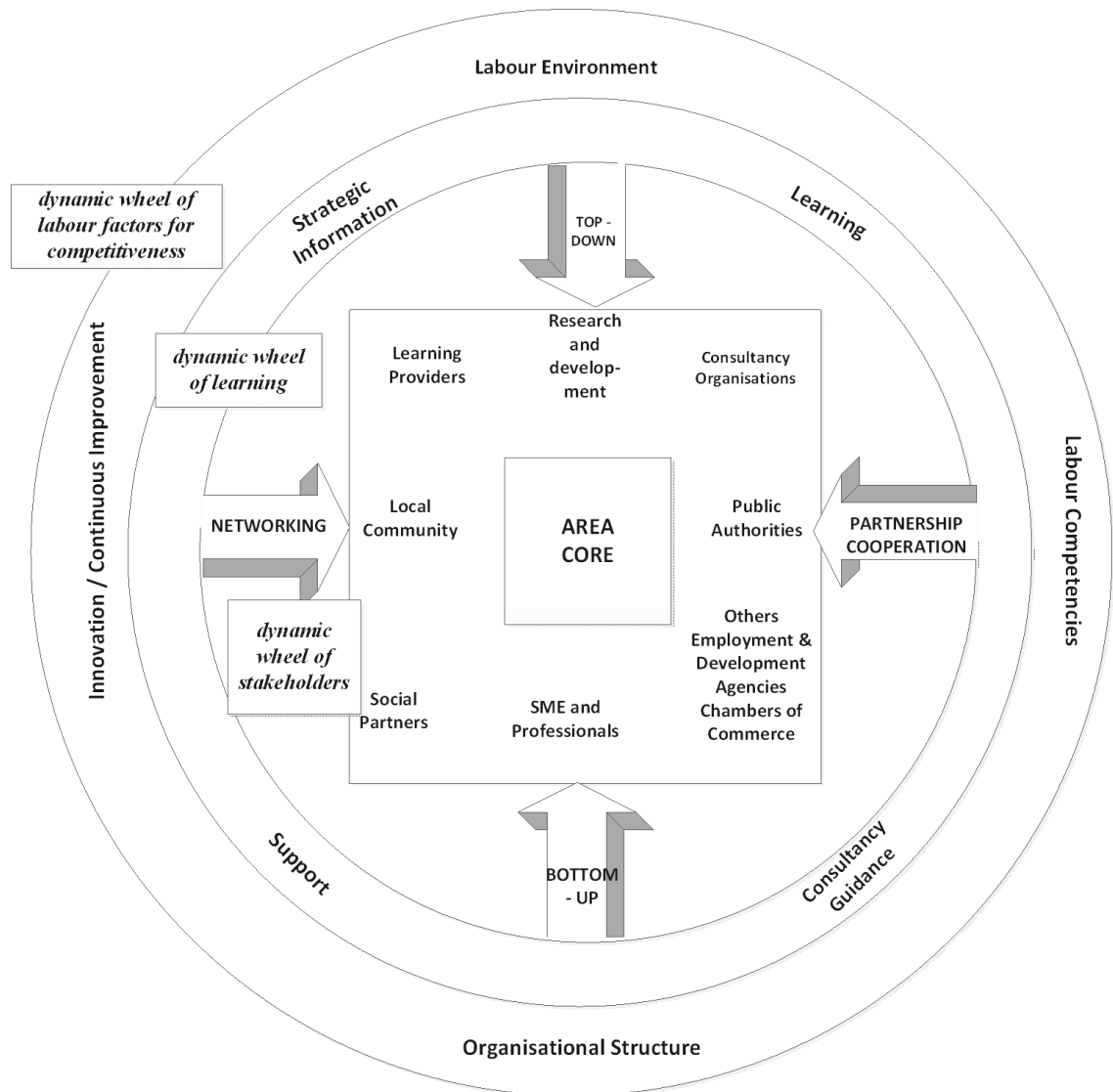
McMillan's (2002) Fractal Web offers an insightful format into structuralising an organisation so that it can function and develop as an adaptive complex system, thus being aware of and taking advantage not only of the self-organisation and emergence constructs but also the other elements of chaos and complexity that have been investigated in detail, including edge of chaos, the butterfly effect and bifurcation. Moreover, although the model is intended for individual business organisations, the same principles can also apply to the tourism destination as a whole. This can be explained further by considering the tourism learning area process model developed by Moles-Moles (2003).

3.5.4.3: Self-organisation and emergence in a tourism destination

Moles- Moles (2003) provides a model which explains the concepts underlying the establishment of a tourism destination learning area, which is similar to McMillan's (2002) Fractal Web (see Figure 3.7 below).

For example, both the models use a conceptual approach to illustrate the methods of advancing the organisation / destination. McMillan (2002) evokes an image of a spider's web with its interwoven fractal replications alongside that of a heart and circulatory system so as to emphasise the fractal and free flowing properties of a complex adaptive system. Moles-Moles (2003) and later the European Commission (2006), using the same model, adopt a more technical approach; they conjure the image of three dynamic wheels acting together in synchronisation to propel the system forward which culminates in the formation of the learning region. The inner wheel is referred to as the 'dynamic wheel of stakeholders', the middle wheel is known as the 'dynamic wheel of learning' and the outer wheel is labeled the 'dynamic wheel of labour factors for competitiveness'. Both models are constructed so that the organization/ tourism destination develops as a complex adaptive system. The core of McMillan's (2002) model is represented as the heart, the function of which is to nurture and sustain the rest of the system by ensuring that all of the agents participate in the creation and communication of the 'driving principles' of the organisation. Moles-Moles (2003) suggests the use of a leader to function at the core of the three wheels in the guise of either a regional development association, a local/ regional authority, a learning centre or a local social partner. He suggests a core area partnership which consists of business associations, public administrative departments and learning centres. The values and principles which emerge from the heart, or core, manifest themselves as a common vision, in essence the strange attractors discussed previously.

Figure 3.7: learning area process model



Source: adapted from Moles-Moles (2003)

The ethos and values artery and the intelligence artery of the Fractal Web can be compared with the outer wheels of Moles-Mole's (2003) model. In particular, the dynamic wheel of learning aims to develop organisational collaboration and opportunities for learning underpinned by guidance and mentoring in much the same way as the chambers encircled by the ethos and values artery aspire to innovate and transform the organisation, substantiated with a common set of organisational values. The outer wheel of labour factors for competitiveness seeks to improve organisational

management competencies while the chambers inside the intelligence artery provide space and opportunity to do so.

The two models are based on what McMillan (2003: 170) describes as the 'four key principles of complexity: self-organizing principles; complex adaptivity; fractals; and notions of patterning, rhythms and flows'. Essentially, both models are inter-connected and function as complex adaptive systems in which the whole is more than the sum of the parts.

3.5.5: Connectivity

According to Choi *et al.* (2001: 354), a complex adaptive system can be described as 'an aggregate of agents and connections' and they suggest that network theory, or science, can be of help in understanding such systems. Baggio *et al.* (2010: 803), explain that the 'basic idea of this body of knowledge is that the structure of social interactions influences individual decisions, beliefs and behavior' and suggest that network analysis has become a standard method of analysis in organisational management. Meanwhile, Dredge (2006: 270) declares that network theory 'seeks to improve understandings about the formal and informal organisational structures that span private and public sectors and that shape collective action' and that network members collaborate to achieve common goals which ultimately gives rise to competitiveness and innovation.

The levels of connectivity in the system determine its complexity. If there are no connections then the independent action of the agents will result in a formless, aimless system, while too many connections can result in saturation. According to McCarthy *et al.* (2006: 442) a 'CAS [complex adaptive system] is somewhere between a linear and a chaotic system, with partially connected agents whose decision making and interactions produce behavior and outcomes that are neither fully controlled or arbitrary'.

Baggio (2008: 151) believes that by studying the topological structure of a tourism destination insight can be gained into the functioning of the system: '...it is possible to model a tourism destination as a complex network and use the ideas, the concepts and the techniques of network science to study its topology and its evolution over time'. Consequently, Baggio *et al.* (2010) conducted quantitative studies surrounding the development of an Italian destination, Elba, and came to the conclusion that the presence of a structured topology, (meaning a well-organised network and a high degree of cohesion among the agents) greatly improves the spread of knowledge: 'This

supports the notion that destination stakeholders should be encouraged to form clusters and to both compete and cooperate in order to exchange knowledge and hence to raise the overall competitiveness of the destination' (Baggio *et al.*, 2010: 821). Not having such structure in place, therefore, is detrimental to a destination's ability to react to internal and external events in the forms of crises or disasters.

3.5.6: Dimensionality

Dimensionality refers to the amount of autonomy possessed by distinct agents within a complex adaptive system. Negative feedback in the form of rules and regulations serves to reduce dimensionality while positive feedback tends to reinforce it and generates creativity and emergence. Dimensionality and the degree of autonomy given to agents is related to the concept of self-organisation and bottom-up synthesis. It was suggested previously that rigid crisis plans can restrict this process and that the situation can be best resolved by providing informed agents with sufficient leeway and flexibility to search for solutions themselves.

3.6: Environment, incorporating dynamism, rugged landscape

This section considers the system's environment. Continuous interaction among the system's agents and between the agents and their environment is referred to as dynamism. This enables both the system and the environment to evolve and improve in the process known as co-evolution. It is related to the concept of 'rugged landscapes', which involves complex adaptive systems seeking to enhance themselves in response to other complex adaptive systems.

Cilliers (1998) describes how the behaviour of fish (an example of a complex adaptive system) relates to their environment:

The condition of the fish would depend on a large number of factors, including the availability of food, the temperature of the water, the amount of oxygen and light, the time of the year, etc. As these conditions vary, the size of the school of fish will adjust itself optimally to suit prevailing conditions, despite the fact that each individual fish can only look after its own interests. The system of the school as a whole organizes itself to ensure the best match between the system and the environment. This organisation is also adaptive in the sense that the school will be sensitive to changing conditions in the light of past experience. There is no agent that decides for the school what should happen, nor does each individual fish understand the complexity of the situation. The organisation of the school emerges as a result of the interaction between the various constituents of the systems and its environment (Cilliers, 1998: 88-90, cited in

Holden, 2005: 653).

Complex adaptive systems continually interact with their environment which consists of agents and phenomena that are not attached to the system; in an organisational setting, this is composed of the natural environment, competition, the economy, socio-cultural and political factors and technology (Amagoh, 2008). McMillan's (2002) Fractal Web shows how the system is open to the environment via its arteries and is structured so that the agents can respond to external events rapidly (all the time guided by an organisational sense of direction and rationale). The west-to-east arteries collect intelligence from the environment which then flows throughout the system (McMillan (2002).

The interactions which take place between the agents and the environment can be considered as the flow of energy which enables the system to evolve and grow, the suggestion being that organisations and their agents are able to learn from their environment and restructure themselves (self-organisation) to adapt to changes when they occur. Eppel (2009) speculates that as changes in the external environment lead to internal modification, change consequently follows in the external environment. This is linked to the previous concept of co-evolution as the system and its environment adapt to each other.

These observations can also be applied to tourism. As McKercher (1999: 431) clarifies, 'while the internal tourism community is clearly at the heart of any successful tourism system, its survival is dependent on those elements that flow into it and the impacts of its outputs on its surrounding environment. As such, one cannot analyse tourism without being aware of how other elements shape the community and how the tourism community shapes those elements'. The tourism environment is open to disturbance from numerous distinct origins and there is always the potential for crises and disasters. By accepting and understanding the relationship with the environment and by viewing the tourism destination as an ecological system of sorts (Farrell and Twining-Ward, 2005), managers can prepare for such events by permitting the complexity principle of self organisation to emerge naturally. To do so, the destination needs to become a learning destination.

3.6.1 Dynamism

Complex adaptive systems are dynamic and the continuous flow of energy, information and ideas which move throughout the system give it an almost life-like aura. The interactions of the agents who self-organise and adapt to change serve to demonstrate

the system's vitality, while the external environment also exhibits dynamism and constant change. Hence there are a large number of elements, both inside and outside the system that are constantly interacting and exchanging information. According to O'Sullivan (2009: 241), 'the inherent dynamism of chaotic systems' improves their adaptive capacity.

The tourism system is likewise dynamic. As McKercher (1999: 425, 427) explains, 'tourism is an inherently non-linear, complex and dynamic system' with 'literally hundreds or thousands of businesses entering and exiting the marketplace, changing ownership or repositioning themselves radically each year'. Positing an analogy which was later further developed by Farrell and Twining-Ward (2005), McKercher (1999: 433) believes that tourism systems function 'in a manner akin to living ecological communities' in which turbulence and change are an intrinsic part and the system evolves naturally towards the edge of chaos. Crises and disasters themselves are inherently 'dynamic' (Fink, 1986: 20) in that they can rapidly and unpredictably change their shape and scope. A dynamic learning destination, following the principles of McMillan's (2002) Fractal Web and Moles-Mole's (2003) Learning Area Process Model will, therefore, be better equipped to cope when a negative situation occurs.

3.6.2: Rugged landscape

The final component of Choi *et al's* (2001) model of underlying dynamics is that of 'rugged landscapes', or 'rugged fitness landscapes' as coined by Kauffman and Weinberger (1989). Kauffman's theory has been described as follows:

Kauffman believes that it is more appropriate to speak of co-evolution rather than evolution because natural selection...involves complex living systems continually adapting in response to ongoing adaptations of adjacent complex dynamical systems... He discusses such changes in terms of what he calls "fitness landscapes" or "rugged landscapes". Kauffman likens ecosystems to vast landscapes in which those most advantaged at particular moments loom much higher like lofty mountains and others are lower according to their adaptational fitness at the time (Sulis and Combs 1996: 244).

Fitness, in an organisational sense, is described by McCarthy (2004: 129) as 'the capability to survive by demonstrating adaptability and durability to the changing environment'. To demonstrate the concept, it pays to imagine two contrasting mountainous landscapes. The first is a 'one peak' landscape in which one mountain looms higher than the others- this element appears has a higher level of adaptational

fitness. The second is a 'rugged landscape', in which all the mountains are of a similar size and demonstrate similar levels of fitness. In organisational management, this concept can be used so that organisations may visualize where they are on the competitive landscape. A tourism destination can do likewise. For example, the first landscape could refer to a number of destinations in a particular region (for example, the Mediterranean or the Caribbean) in which one is more successful, or fitter, than the others, while the second landscape could indicate that the destinations in a specific area are evolving in a similar manner without one in particular outperforming the others.

The landscapes can also be used to picture the elements within the complex adaptive system and the co-evolution taking place between these components as was mentioned earlier. According to Stacey (1996), from an organisational viewpoint the landscape should be neither too smooth nor too rugged, without prominent peaks but also without too many valleys. In this way, the agents may coevolve to a point between order and chaos (Anderson, 1999). Consequently, DMOs wishing to place themselves on the high peak landscape in a regionally/international sense should, therefore, seek a rugged landscape within their own system in which all stakeholders/ businesses are able to co-evolve and emerge on a higher level. Agents within the system which begin to form a high peak through superior fitness levels will be copied by 'competitors' who in turn will improve their performance thus raising the competitiveness of the destination as a whole. A possible way of permitting such shared innovation is by adopting the concept of the learning destination or learning region.

3.7: Summary

In Chapter 2 it was established that a number of weaknesses are present in contemporary tourism crisis and disaster models. A significant limitation is that current models fail to explain the complex relationships that exist in the tourism system and its environment. Despite chaos and complexity theory being suggested as a suitable theoretical foundation for the study of tourism, researchers appear wary to do so and, consequently, it is not sufficiently considered in current models. The purpose of this chapter was, therefore, to explore the relevance of complexity theory to the management of tourism crises and disasters. In order to do so, it focused on the properties of complex adaptive system as identified by Choi *et al.* (2001). While all the elements of a complex adaptive system are inter-connected and essential, the elements of edge of chaos, butterfly effect, bifurcation, cosmology, self-organisation, strange attractor, and emergence were selected for particular emphasis, as they are the most relevant in the context of this thesis. To counter the negative effects of a crisis

or disaster, a suitable DMO can facilitate the processes so that the destination effectively functions as a complex adaptive system in the edge of chaos state. Not only will the destination harness a collective belief and vision which will function as a strange attractor to facilitate emergence in times of crisis, it will also enable the knowledge flow and coordination necessary for the development and execution of crisis plans.

Complexity and chaos theory has emerged to challenge traditional forms of tourism crisis and disaster management. It offers a number of contrasting views which have gained the attention of tourism academics. Borrowing from Gilpin and Murphy's (2008: 108, 109) summary of the philosophical assumptions associated with traditional management theory and complexity theory and placing it into the context of destination crisis management, the following two paragraphs outline the overall differences in the two managerial perspectives:

Traditional tourism management theory: the future is, to a degree, rather predictable; events can be controlled; uncertainty is not desirable and can be overcome by communication and action strategies; stability is desirable; the destination can be compared to a mechanical system; clear boundaries exist between the destination and its external environment- the destination should study the environment and adapt accordingly; destination culture can be identified and measured and therefore manipulated as needed; an institutionalised tracking system is the most efficient method of creating and transferring knowledge and information throughout the destination; all possible alternatives should be considered when making a decision by thorough analysis of the situation; the main goal of tourism crisis management is to avoid or limit damage and to restore legitimacy as quickly as possible; tourism crisis and disaster response involves the centralisation of decision making measures around a crisis management team who work exclusively on matters related to the crisis; lessons will be learned if the crisis management team examine the data to identify mistakes and update the crisis management plan accordingly.

Chaos/ complexity theory: the future is too erratic and volatile for prediction, but still recognisable in the shape of historical patterns; events cannot be controlled as they depend on a multitude of exogenous factors. The only thing that can be 'controlled' is the destination's behaviour and, consequently, its preparedness for crises and disasters; uncertainty is unavoidable so it should be accepted. Communication and action should, therefore, be geared towards permitting the destination to enact change and to adapt to change; stability is undesirable as it leads to inertia and ultimately the

death of the system; a destination is complex and emergent, unlike a mechanical system; the destination is fluid and has socially constructed boundaries which form a weak divide between the destination and the environment- agents are encouraged to interact with the environment so as to enact and participate in changes; destination culture is dynamic and in a constant state of flux due to interactions inside and outside the destination boundaries; daily interactions throughout the destination and its environment and autonomy with the focus of developing expertise is seen as the most effective means of learning; quick, effective decision making in changing situations is engendered by the concept of a learning destination in which expertise is developed through the acquisition of knowledge; to avoid damage and to regain legitimacy through learning processes which will require internal changes; tourism crisis and disaster response involves the use of an experienced team composed from a variety of stakeholders who have acquired the expertise through learning processes to respond to the situation- however, the team will be aware of its limitations and weaknesses and will possess the flexibility to modify its response and look for additional help if necessary; crisis and disasters are best handled by the development of expertise so that skillful improvisation and a flexible response take preference over detailed planning; lessons are learned if the destination engages in triple-loop learning and carefully examine the complexities surrounding the situation and makes the necessary changes throughout the destination.

While complexity theory appears to offer a genuine, credible alternative to traditional methods of tourism crisis and disaster management, it must be acknowledged that the ideas, in a tourism context, are conceptual and have yet to be empirically tested in real crisis and disaster situations. However, because of its potential to revolutionise the field of tourism crisis and disaster management, it is imperative that this be done. Chapters 5 and 6 will, therefore, investigate two specific tourism crises and disasters which have had distinct and major impacts upon their respective communities and the broader tourism community worldwide. The first case to be discussed will be the Foot and Mouth outbreak which affected the United Kingdom in 2001 and caused significant damage to the country's rural tourism sector; the second case study will be the H1N1 Influenza crisis which took place in Mexico in 2009. First, however, the following chapter will consider the methodological reasoning underpinning the research.

Chapter 4

Methodology

4.0: Introduction

It has been noted how contemporary tourism crisis management models do not appear to consider the nuances which inevitably surface between one crisis or another and, instead, offer guides which are meant to suffice for every situation. As well as not considering the unique size and scope of emerging predicaments, they also fail to take into account differences in culture and resources that exist between tourism industries. A similar state of affairs is to be found in tourism research in general. For example, Phillimore and Goodson (2004: 186) have observed that the host community is often portrayed as 'one monolithic group', with no attention being afforded to the dissimilarities to be found within a tourism destination. They suggest that this is a 'sanitising of real life and over-simplification of complex issues and places' (Phillimore and Goodson, 2004: 186) which ignores reality and can, unfortunately, lead to a false impression being projected to the reader. This state of affairs has led to Phillimore and Goodson (2004: 185) insisting that there must be 'greater consideration of epistemological, ontological and methodological issues in relation to the researcher as an individual, to the research problem and the research setting, and to how the different elements of the research process can fit together in a complementary fashion'.

The purpose of this chapter is to clarify the ontological and epistemological assumptions which influence the choice of methodology, to justify the choice of research methods and to discuss the data gathering and analysis techniques that were used. The chapter begins by considering what Thomas (2004: 197) refers to as the 'interconnected issues' of ontology, epistemology and methodology. It is subsequently established that interpretivism will be the paradigm that guides the research. It has been chosen for two reasons. Firstly, the researcher's ontological and epistemological beliefs are that the world is composed of multiple realities, and that knowledge is a subjective human product which is constructed by exploring how people interpret the world and the phenomena that exist within it. Secondly, the aims and objectives of the research dictate that this paradigm be adopted; that is, the extensive scope of the research inquiry demands an interpretivist, rather than a positivist approach, and the research context of the tourism system, complexity theory, crises and disasters and 'learning organisations' are specifically appropriate for an interpretivist approach.

A qualitative case study research method is adopted, as this approach is particularly suited to the exploration of phenomena in their real life context. There are two case studies, one being the FMD crisis which took place in the UK in 2001 and the other being the H1N1 Influenza crisis which occurred in Mexico in 2009. Semi-structured interviews and document analysis are the methods chosen to obtain the information upon which the case studies are constructed. The choice of interview respondents is discussed, along with the location of the interviews, the types of questions that were asked and the methods employed to interpret the collected data.

4.1: Paradigms

Methodologies are guided by paradigms, which can be described as ‘the belief, assumptions, and values that underlie the way that various perspectives interpret reality’ (Jennings, 2010: 441). Creswell (1997: 6) prefers the term ‘worldview’ to paradigm, as it refers to the manner in which groups of people perceive the world. People have different ways of seeing the world, which can change over time and according to the circumstances. This worldview is formed by ontological and epistemological beliefs. Ontology concerns the nature of reality. Some people believe that there is an objective, independent reality while others believe that reality is a consequence of social processes (Neuman, 2003), or as a human construct (Mutch, 2005). Meanwhile, epistemology, in a broad sense, is chiefly concerned with what knowledge is, how knowledge is attained and whether this acquired knowledge is adequate. According to Tribe (2004: 46), ‘its essential concerns are the meaning of the term ‘knowledge’, the limits and scope of knowledge and what constitutes a valid claim to know something’. Simply put, epistemology asks the question: ‘what counts as knowledge?’ Similar to ontology, some people would answer this question by arguing that knowledge is objective, ‘based on direct observation or manipulation of natural phenomena through empirical, often experimental, means’ (Tuli, 2010: 100), while others would view knowledge as subjective, ‘constructed, interpreted, and experienced by people in their interactions with each other and with wider social systems’ (Tuli, 2010: 100).

Creswell (2009) suggests that paradigms lie in a continuum. At one end of this continuum sits the positivist paradigm and, at the other end, appears the contrasting paradigm of interpretivism. Other paradigms exist along the continuum, some more related to positivism, while others are more akin to the interpretivist paradigm.

Positivists hold a nomothetic ontological perspective of a natural and social world which 'exists independently of the human mind' (Seale, 1999: 230); rather it is perceived 'as being organised by universal laws and truths' (Jennings, 2010: 36). It consequently has an objectivist epistemology in which only 'facts' that are derived from scientific experiments can be classed as legitimate knowledge. Guba (1990: 19) explains the positivist epistemological position: 'If there is a real world operating according to natural laws, then the inquirer must behave in ways that put questions directly to nature and allow nature to answer back directly'. Therefore, research should be objective and value-free (Jennings, 2010). It is typically associated with a quantitative, linear, experimental approach with an emphasis on measurement, causality, generalisation and replication (Bryman and Bell, 2007).

The interpretivist approach, meanwhile, turns the positivistic approach 'upon its head' (Phillimore and Goodson, 2004: 35). It has a relativist ontological viewpoint which considers the world as being composed of multiple realities, in which there are 'multiple explanations or realities to explain a phenomenon rather than one causal relationship' (Jennings, 2010: 40). That is, many social realities are evident in the world as a result of varied human experience, which affects their interpretations of experiences. Accordingly, the interpretive paradigm has a subjective, as opposed to objective, epistemological outlook, which believes that the world can be understood from the lived experience of those that inhabit it. It is concerned with how the world is interpreted, recognised, experienced and organised (Mason, 2002), and research informed by this paradigm will adopt a qualitative methodology which includes methods such as participant observation, in-depth interviews, focus groups and case studies (Jennings, 2010). Table 4.1 below outlines the ontological and epistemological positions of positivism and interpretivism:

A particular paradigm is adopted because it corresponds with the philosophical outlook of the researcher. That is, it reflects the researcher's beliefs in the nature of reality and the meaning and validity of 'true' knowledge. In the case of this study, the researcher has chosen the interpretivist paradigm. The reason for this is that the researcher's ontological perspective is of a world made up of multiple realities, socially constructed by individuals who exist within various socioeconomic, cultural and political contexts. Furthermore, his epistemological belief is that knowledge is interpreted by interacting with those who have experienced the phenomenon in question.

Table 4.1: The ontology and epistemology of positivism and interpretivism

	Positivism	Interpretivism
Ontology		
Nature of 'being'/ nature of the world	Have direct access to real world	No direct access to real world
Reality	Single external reality	No single external reality
Epistemology		
'Grounds' of knowledge/ relationship between reality and research	Possible to obtain hard, secure objective knowledge	Understood through 'perceived' knowledge
	Thought governed by hypotheses and stated theories	Seeking to understand specific context

Source: adapted from Carson *et al.* (2001)

4.2: Revisiting the aims, objectives and research questions

Another reason for adopting a certain paradigm is because it is appropriate for a particular line of research. This section will consider the aims, objectives and research questions for this study and the research method best suited to address them.

4.2.1: Aims and objectives

The overall purpose of this research is to identify whether the proposed limitations associated with contemporary tourism crisis and disaster are demonstrated in practice and to consider if a complexity-based perspective on tourism crisis and disaster management represents a more viable framework for managers of tourism destinations preparing for and responding to crises.

More specifically, the objectives of this research are to:

- ☐ Examine critically Faulkner's (2001) framework and also consider applications of the framework and other tourism crisis management models.
- ☐ Determine the issues which limit tourism crisis and disaster management frameworks.
- ☐ Consider the elements of complexity theory in relation to tourism crisis and disaster management.

- Explore the extent to which the proposed limitations of crisis management models and the elements of complexity theory have been manifested in practice, specifically during the FMD tourism crisis and the H1N1 Influenza tourism crisis.
- Establish whether complexity theory would have provided a viable framework for the management of the FMD tourism crisis and the H1N1 Influenza tourism crisis

4.2.2: Research questions

Three particular questions will guide this research:

1. Were the proposed limitations associated with contemporary tourism crisis management models manifested during the FMD crisis in the UK and the H1N1 Influenza crisis in Mexico?
2. Are elements of chaos and complexity theory present in the case studies?
3. Do the case studies suggest that a complexity based perspective offers a more appropriate approach to destination crisis and disaster management?

To fulfil the aim, complete the objectives and answer the research questions, it is necessary to tailor a combination of theoretical awareness and methodological sophistication (Dann *et al.*, 1988). Denzin and Lincoln (1998) suggest that it is useful for a researcher to imagine that he or she is a *bricoleur*, 'an individual who pieces together sets of practices to make a solution to a puzzle' (Goodson and Phillimore, 2004: 34).

More specifically, an epistemological and methodological perspective is required which will enable the researcher to reach conclusions regarding the limitations of contemporary tourism crisis management theory and the possibilities offered by viewing the tourism as a complex adaptive system. Simply put, the epistemology and ontology must fit the research. There are a number of issues to be considered which are demonstrated in table 4.2 below.

	Contemporary Models Framework	Complexity theory Framework
Fundamental concepts	<p>Crises as predictable, linear processes.</p> <p>Identifiable stages of crises that are manageable.</p> <p>Crisis management based on a business / organisation context.</p> <p>Detailed, prescriptive planning</p> <p>Main goal is to limit damage and to restore stability.</p>	<p>Crises as unpredictable, non-linear processes.</p> <p>Also suggests a similar number of manageable stages from edge of chaos to emergence.</p> <p>Crisis management predominantly based on the system operating as a complex adaptive system.</p> <p>Improvisation and flexible response.</p> <p>Goal is to limit damage and emerge as an improved destination.</p>
Key terms	Stages of crisis management (Pre-event planning, prodromal, emergency, intermediate, recovery, resolution); precursors; risk assessments; contingency plans; coordination, consultation; commitment; involvement; education; review.	Stages (edge of chaos, butterfly effect, bifurcation, cosmology, self-organisation, strange attractor, emergence); Learning organisation; knowledge management; adaptive management; complex adaptive system; agents; connectivity; coevolution; non-random future; dynamism; fractals.
Similarities	<p>Different stages: Pre-event planning, prodromal, emergency, intermediate, recovery, resolution.</p> <p>High level of importance of pre- event planning in order to conduct the prerequisites associated with the frameworks (risk assessment, contingency planning, consultation, warning systems, etc.,)</p> <p>The importance of communication and marketing: These are vital components of conventional models. For example, truthful communication is advised in the emergency phase, as is a suspension of marketing. Domestic marketing strategies are encouraged in the intermediate stage, followed by the commencement of international strategies in the recovery phase.</p> <p>The importance of learning: Conventional models recognise the need to reappraise policy and planning approaches in the resolution phase (see Faulkner, 2001).</p>	<p>Different stages: Edge of chaos, butterfly effect, bifurcation, cosmology, self-organisation, strange attractor, emergence.</p> <p>High level of importance of pre-event planning: Vital to have established a learning destination and to be functioning in the 'edge of chaos' zone.</p> <p>The importance of communication and marketing: Likewise, the complexity framework fundamentally follows the same communication and marketing directives recommended within the contemporary models framework.</p> <p>The importance of learning: The complexity framework is based around the concept of continuous learning and improvement.</p>

	Contemporary Models Framework	Complexity Theory Framework
Limitations	<p>Theoretical applicability and acceptability: It could be argued that a framework derived from organisational management theory is not applicable to tourism destination management due to issues relating to homogeneity.</p> <p>The models also tend to include 'disaster strategies' in the emergency phase, such as rescue/evacuation procedures (see Faulkner, 2001). Armstrong (2008) argues that this is the responsibility of government emergency services and not the tourism industry.</p> <p>Practical applicability and acceptability: Contemporary models fail to comprehend the unpredictability of crises; they are overly rigid and prescriptive; they offer a one size fits all approach when in reality crises differ in size and scope and their contextual elements; they do not consider the lack of coordination evident in crises.</p> <p>Contemporary models unlikely to be accepted in certain cultures for various reasons, such as mistrust of authority or simply for the fact that a particular culture prefers a reactive, rather than proactive approach to crisis management (see de Sausmarez, 2004).</p>	<p>Theoretical applicability and acceptability: Burnes (2005: 86) argues that complexity theory is 'merely a metaphorical device to gain insights into the workings of an organization'. Consequently its suitability as a 'prescriptive force' is diminished because it lacks the scientifically tested analysis necessary to underpin its feasibility. Meanwhile, Levy (2000) questions whether a theory based on biological and natural systems is applicable for the study of a social system. For example, the social world contains forms of human, political and economic systems not evident in biological systems. This leads to uncertainty regarding whether complexity theory can be accepted as a theoretical method of investigating organisations, or, in this case, destinations.</p> <p>Practical applicability and acceptability: Would prove difficult to implement due to issues relating to destination governance and stakeholder acceptance. For example, the question arises as to who 'manages the destination' - who has the responsibility to implement a learning destination? Also, while theoretically logical, it is unlikely to be accepted in the 'real world' due to issues related to a destination's socio-cultural, human, financial and technological capital. There may also be issues related to the abstract nature of 'learning destinations' and its processes and the length of time for its benefits to come to fruition.</p>
Benefits	<p>Serve to identify discernible phases of the disaster which is particularly useful as a means to describe and analyse the crisis. Also useful as a means of planning for and managing a crisis or disaster. For example, each phase offers a managerial guide to planning and responding to a tourism crisis. It is suggested that these models would be more acceptable to people working in the sector because they offer tangible, simple strategic instructions on general crisis management.</p>	<p>Crisis management is only one of many improvements that a learning destination could purportedly bring to a destination- there should be improvements to a destination's general competitiveness. Offers a new way of viewing change- it is an anticipated product of the dynamism associated with a complex adaptive system and should be expected rather than feared. The crisis plan is formulated for the specific situation building on knowledge stored in databases and personal expertise gained during learning processes.</p>

Table 4.2: Key concepts, terms, limitations and benefits of the research frameworks

4.3: The interpretive paradigm

The range of research issues evident in Table 4.2 demonstrates the wide scope of the research objectives and questions; they embody 'a wide sweep of contexts: temporal and spatial, historical, political, economic, cultural, social and personal' (Stake, 2010: 31). As such, the 'fastidious linear investigative procedures' (Hollinshead, 2006: 48) of positivism and in particular, its 'reductionist, anti-subjective perspective' which 'does not allow for researching human phenomena as holistic and interactive' (Szarycz, 2009: 47) suggests that positivism would not be an appropriate framework from which to approach this study. The interpretivist perspective, however, is 'explicitly designed to capture complex, dynamic, social phenomena that are both context and time dependent' (Orlikowski and Baroudi (1991: 18). Specifically speaking about tourism, Jennings (2007: 12) argues that 'tourism is a complex and multiple phenomena and so needs to be considered in a more holistic way rather than in segmented and controlled contexts and experiments.' The interpretivist framework, therefore, is an appropriate fit for the aims, objectives and research questions of this study as it caters for the complex nature of the issues under consideration and allows for a subjective, holistic approach to an inquiry which is made up of multiple experiences from a plethora of stakeholders.

Having considered the epistemological and ontological issues relevant to this research and choosing the interpretivist paradigm as a framework to conduct the study, the next step is to consider a methodological approach which fits with this approach.

4.4: Methodological approach: Qualitative research

Methodology can be viewed as 'a bridge between our philosophical standpoint (ontology and epistemology) and methods; it is related to how we carry out our research' (Hesse-Biber and Leavy, 2011: 38). To determine their methodological approach, Mason (2002) suggests that the researcher consider five questions. These questions relate to the researcher's personal ontological and epistemological perspectives, the research area and the research questions and the aim of the research which have been addressed in the above sections (see Table 4.3).

Table 4.3: Mason's five questions: How the researcher's ontological perspective and epistemological position relates to this research

Ontological perspective	Epistemological position	Broad research area	Intellectual puzzle and research questions	Aims and purpose
<p>Relativist- recognition of multiple perspectives</p> <p>An inductive approach to research</p> <p>'...assumes multiple, apprehendable, and sometimes conflicting social realities that are the products of human intellects, but that may change as their constructors become more informed and sophisticated' (Guba and Lincoln, 1994: 111).</p>	<p>Subjectivist- knower and subject cocreate understandings (Jennings, 2010: 40).</p> <p>The subjective viewpoints of people and their experiences is the basis for understanding.</p>	<p>Tourism crisis and disaster management</p> <p>Complexity theory</p>	<p>Were the proposed limitations associated with contemporary tourism crisis management models manifested during the FMD crisis in the UK and the H1N1 crisis in Mexico?</p> <p>Are elements of chaos and complexity theory present in the case studies?</p> <p>Do the case studies suggest that a complexity based perspective offers a more appropriate approach to destination crisis and disaster management?</p>	<p>Aims:</p> <p>Identify whether the proposed limitations associated with contemporary tourism crisis and disaster management are demonstrated in practice and to consider whether a complexity-based perspective on tourism crisis and disaster management represents a more viable framework for managers of tourism destinations preparing for and responding to crises.</p>

Source: Adapted from Mason (2002)

The researcher's ontological perspective and epistemological position point toward a qualitative, rather than a quantitative, research strategy. Creswell (1998: 225) defines qualitative research as 'an inquiry process of understanding based on distinct methodological traditions of inquiry that explore a social or human problem. The researcher builds a complex, holistic picture, analyses words, reports detailed views of informants, and conducts the study in a natural setting'. It particularly complements the complexity perspective 'by allowing emergent properties to be identified, which would not emerge through a quantitative approach' (McDonald, 2006: 103). Furthermore, as indicated by Horn (2002: 68 and 69):

The researcher wanting to understand tourism in a complex system and its associated processes and interactions must have time to observe, participate and discover contexts, emergent features, outside influences, internal dynamics and the processes by which people negotiate the meaning of tourism, planning and impacts. Qualitative methods such as participant observation / in-depth interviews and historical research are much more able to track change, development and context... Qualitative methods also lend themselves to the analysis of interactions between individuals and groups within a community. Understanding local politics, for example, is best achieved using qualitative methods, since it allows one to observe how people affect each other's behaviour. It is more possible to map patterns of interaction using a qualitative approach. Overall, qualitative methods, including unstructured or semi-structured interviews and participant observation, allow a much greater depth of understanding of a system. Similarly, the use of written sources, including histories, family records and previous research reports, can provide good background information which may not necessarily come to light in the use of other methods.

4.5: Research methods

4.5.1: Case studies

Taking into consideration the aims and objectives of the research and its philosophical beliefs, the case study was chosen as the research method best suited to attaining the aims and objectives of this research. It allows for events to be explored in their natural setting, permits the researcher to 'retain the holistic and meaningful characteristics of real-life events' (Yin, 2009:4), allows for the collection of multiple sources of evidence and is also suited to the addition of fresh perspectives to existing theory.

The research is conducted in the form of a collective (Stake, 1995), or multiple (Yin, 2003) case study (multiple meaning two or more) and could be described as being interpretative (Merriam, 1988) or instrumental (Stake, 2005). Importantly, multiple case studies allow for comparison (which will be undertaken in the concluding chapter). In the case of this thesis, it allows the research questions to be investigated in the context of two distinct tourism crises, thus adding to the viability of the study.

Case studies are used extensively in tourism research (Beeton, 2005, Botterill and Platenkamp, 2012)) and are particularly useful in that they can explore atypical social processes that are poorly understood (Finn *et al.*, 2000: 82), as they allow inquiry into 'a contemporary phenomenon in depth and within its real-life context' (Yin, 2009:18). Case studies provide insight into the success or failure of innovations; they have the advantage of hindsight; they demonstrate the complexity of a situation; they illuminate the influence of personality and politics; they use a wide variety of information; they investigate a general problem by examining one particular instance; they have an holistic-inductive nature (Beeton, 2005); and, finally, they have the ability to deal with wide variety of documents (Yin, 2009).

4.5.2: Case studies and complexity theory

According to Anderson *et al.* (2005: 672), the case study is 'a research approach uniquely suited to carrying out a study designed from a blueprint of complexity theory'. They present a number of 'extensions' which complexity theory can add to case study research and allow the researcher to study the system as an integrated whole.

- i. Understand interdependencies: Studying the interactions and interdependencies between the system's agents helps to understand the dynamics of the tourism system and its environment. Importantly, by including the environment, the usual case study tradition of bounding the case and only studying phenomena inside it is disregarded as insight can be gained by exploring behaviour which occurs outside the system's boundaries.
- ii. Sensitive to dimensions of relationships: There needs to be a vivid understanding of the relationships which take place in complex adaptive systems and the forms in which agents are comparable or disparate as diversity can be both beneficial and detrimental.

- iii. Focus on nonlinearities: Notice must be taken of small events which result in wholesale change and transformation, and also large events which culminate in little change.
- iv. Look for the unexpected: Interviewing diverse people from across the tourism system (multiple realities) can identify unexpected patterns of behaviour to increase the researcher's understanding of the system's complexities.
- v. Examine unexpected events: The researcher must take care not to accept explanations which attempt to 'normalise' unexpected behaviour: 'Be sure to try to detect the nature of the organization's response to uncertainty. In particular, to what extent do they try to control uncertainty, as opposed to leveraging it, and what strategies do they use?' (Anderson *et al.*, 2005: 677).
- vi. Focus on processes as well as events: This refers to the socially constructed nature of crises. When a crisis occurs, human intervention can often cause the crisis to escalate in a specific way: 'Crises obviously are over determined and human sense making may play only a small part in their development. Nevertheless, crises engage human action, human action can amplify small deviations into major crises, and in any search for causes, we invariably can find some human act which may have set the crisis in motion. It is our contention that actions devoted to sense making play a central role in the genesis of crises and therefore need to be understood if we are to manage and prevent crises' (Weick, 1988: 313).
- vii. Recognise dynamics: 'Informal' self-organisation and emergence processes need to be recognised.
- viii. Describe pattern as well as events: it is important to investigate relationships and interactions which occur over time in order to describe the 'flow' of behaviour within and around the system.
- ix. See patterns across levels: An awareness of fractal patterning within the system.
- x. Understand that patterns change: while it is necessary to explore patterns of behaviour, the researcher should be aware that patterns do change, rather than looking for consistent trends.

- xi. Recognise that in any given situation, different patterns might be successful: 'Because the nature of a complex adaptive system emerges through self-organization...when more than one case is studied, more than one successful configuration is likely to be found' (Anderson *et al.*, 2005: 677).
- xii. Learn the system's history: Studying how the tourism system has evolved over time helps to provide insight into its current behaviour.

There are a number of criticisms related to case study research. These are summarised in Table 4.4 below, which also seeks to justify the use of case study research in the face of such criticism.

Table 4.4: The case study: Limitations and justification

Limitations of case study research	Justification
Rigour: Yin (2009) suggests that there is a perceived lack of rigour due to 'sloppy' investigating and not following systematic procedure.	<ul style="list-style-type: none"> ▪ The researcher adopted a rigorous research approach following the recommendations of Yin (2009). ▪ The fact that the research is a multiple case study adds its validity and robustness (Yin, 2009).
Generalisation: Case studies are widely criticized for providing little basis for scientific generalization: 'In the case-oriented approaches ... it is clear that the goal of appreciating complexity is given precedence over the goal of achieving generality ...' (Ragin, 1987).	While case studies are not generalisable in the traditional sense, the researcher will presume 'naturalistic generalization' on the part of the reader. This can be 'arrived at by recognizing the similarities of objects and issues in and out of context and by sensing the natural covariations of happenings' (Stake, 1978: 6) ; furthermore, Yin (2003: 10) points out that, '...the case study, like the experiment, does not represent a 'sample' and, in doing a case study, your goal is to expand and generalize theories (analytic generalisation) and not to enumerate frequencies (statistical generalization)'.
Bias - Hoaglin <i>et al.</i> (1982) suggest that case studies can mirror the bias of the researcher.	<ul style="list-style-type: none"> ▪ Again, referring to Yin (2003), this criticism can be countered by arguing that bias is just as likely in other research strategies, such as surveys or historical research. ▪ It is proposed that triangulation can overcome researcher bias (Creswell, 1994).
Can be very long, and attempting to reduce the size in order to fit within the thesis regulations can lead to a failure to include all relevant information.	The data was carefully analysed so that all relevant information was included.
Can be difficult to complete.	<p>Yin (2003: 162-163) suggests three characteristics of 'completeness' which the researcher was aware of while preparing, conducting and analysing the research.</p> <p>(1) '...the boundaries of the case...are given explicit attention'.</p> <p>(2) 'The complete case study should demonstrate convincingly that the investigator expended exhaustive effort in collecting the relevant evidence'</p> <p>(3) 'When a time or resource constraint is known at the outset of a study, the responsible investigator should design a case study that can be completed within such constraints...'</p>

4.5.3: Choice of case studies

The case studies were selected as non-probability samples, meaning that they were specifically chosen as cases that would be able to provide a variety of rich, significant material. The FMD crisis, even though it occurred more than a decade ago, was deemed an especially appropriate tourism crisis to study as it had been particularly complex and served to highlight the deficiencies of the British tourism industry at that time. The H1N1 Influenza crisis was chosen because it was a more recent crisis. Moreover, it was also a complex crisis, although lasting for a shorter period than the FMD crisis, and it took place in a distinct cultural setting to the FMD tourism crisis, thus allowing for comparison between the two cases.

4.6: Data collection

One of the strengths of the case study is its ability to utilise a variety of evidence. Yin (2008) advises that there are six sources of evidence for case study research: interview, direct observation, participant observation, documents, archival records and physical artefacts. For this research, two of these sources of evidence were employed- semi-structured interviews and document analysis.

4.6.1: Semi-structured interviews

Semi-structured interviews are associated with a qualitative approach (Jennings, 2005) and are particularly useful in 'complex social and cultural situations' (Stone, 2010: 27) and as a source of information for a case study (Yin, 2003). Jennings (2010: 175) suggests that they have a number of advantages:

- i. Multiple realities can be ascertained.
- ii. Subjective epistemological viewpoints allow for rapport.
- iii. Useful in gathering empirical material on complex issues.
- iv. Detailed opinion regarding attitudes, opinions and values.
- v. Able to ask for further clarification and detail.
- vi. Interview probes can be altered to follow the path of the interview.
- vii. Queries can be clarified.
- viii. Provide a more relaxed setting.

Semi-structured interviews offer a means of answering the research questions and developing theory. Whilst providing a means of asking 'theory-driven, hypothesis-

directed questions' (Flick, 1998: 84), they also provide the flexibility to allow the respondent to express their unique version of events and to make further suggestions and recommendations which can contribute towards generation of theory. While structured interviewing is geared towards the capture of 'precise' data, unstructured or semi-structured interviewing does not impose limits (Fontana and Frey, 1994), and this can result in findings which richly add to the data and the quality of the research. As the interview subjects for this study range from small business owners and tourists to tourism academics and government level planners, the questions asked and the information obtained was expected to differ considerably. Quantitative structured interviews and surveys would not allow for such scope and so semi-structured interviewing was deemed necessary.

There are limitations associated with semi-structured interviewing. Table 4.5 highlights these shortcomings but also justifies the use of this research method.

Table 4.5: Limitations of semi- structured interviews

Limitations of semi-structured interviewing	Justification
Finn <i>et al.</i> (2000: 75) 'Bias may increase as interviewer selects questions to probe and may inhibit comparability of responses'.	Yin (2003) counters this criticism by stating that bias is just as likely in other research strategies, such as surveys or historical research. It is suggested that triangulation can overcome researcher bias (Creswell, 1994).
Can be difficult to establish trust and rapport.	This depends on the personal attributes of both the interviewer and interviewee.
Fleeting contact - The interviewer and interviewee only spend a relatively short amount of time together. Lack of familiarity can result in guarded, hesitant answers which provide little information.	Depends on the 'skill' of the interviewer.

4.6.2: H1N1 Influenza crisis

4.6.2.1: Selection of interview respondents

Using the technique of purposive sampling (also known as judgemental sampling), which involves purposefully selecting potential respondents relevant to the research (Jennings, 2010), approximately sixty possible interview participants were identified from within the Mexican tourism industry. These ranged from key players in the Ministry of Tourism (SECTUR) and the Tourism Board (CPTM) to Mexican tourism academics and business owners. The majority were identified by an internet search, while other individuals were identified by searching for tourism businesses and organisations in Mexico City and Cancun and looking for staff telephone numbers and email addresses. These potential participants were then contacted by telephone and by email and asked if they would participate in an interview concerning the influenza crisis and the response of the tourism authorities. The academics were contacted by the email address provided on their publications and one respondent happened to be a guest at the same hotel in which the researcher was residing in January, 2011. One of the SECTUR participants was an acquaintance of a friend (see below). The interviews took place in Mexico City, Cancun, Playa del Carmen and Texcoco between June, 2010, and January, 2011.

Given that the participants were assured anonymity, this research does not identify them by name. Rather, they are identified by place of work/ role (at the time of the crisis) and the location/ date of the interview.

Table 4.6: H1N1 Influenza crisis respondents

Respondent	Place of work/role	Location/ date of interview
MR1	SECTUR / Director of Technology	Mexico City, 11 th October, 2010
MR2	Colima University / Academic	Mexico City, 6 th August, 2010
MR3	SECTUR / Sub-director of Statistical Operations	Mexico City, 9 th July, 2010
MR4	Real Resort Hotels / Sales Manager	Playa del Carmen, 11 th January, 2011
MR5	National Chamber for the Restaurant and Food Industry / National President	Mexico City, 3 rd December, 2010
MR6	Vantage Strategy Consulting / Director	Mexico City, 26 th November, 2010
MR7	State of Mexico Autonomous University / Academic	Texcoco, 28 th June, 2010
MR8	National Confederation of Mexican Travel Agents / member	Mexico City, 5 th November, 2010
MR9	Ecocolors tour business / owner	Cancun, 13 th January, 2011
MR10	CPTM / employee	Mexico City, 15 th July, 2010
MR11	Mexico City Tourism Board / Secretary of Tourism	Mexico City, 20 th October, 2010
MR12	Tourist	Cancun, 15 th January, 2011

4.6.2.2: Interview preparation

Once a participant had agreed to an interview and a time and location had been set it was necessary to consider the interview process in detail. This involved determining a specific personal approach depending on the individual and the role they played in the crisis and devising a set of questions which would adequately fulfil the research objectives and answer the research questions. The aim, according to Bryman and Bell, (2007: 483) is an attempt to 'get an appreciation of what the interviewee sees as significant and important in relation to each of your topic areas. Thus your questions will need to cover the areas that you need but from the perspective of your interviewees'. As well as preparing suitable questions, Kvale (1996) insists that a successful interviewer must be knowledgeable, be able to structure the interview, be able to ask clear, simple questions, give people time to think and finish, be sensitive, be open, be able to steer the interview, be critical and be able to interpret the answers. To add to this, Bryman and Bell (2007) recommend that the interviewer does not talk too much (or too little) and that ethical sensitivity always be a priority.

Preparing to conduct interviews in Mexico

Of particular note was the fact that the interviews would be conducted in a foreign environment for the researcher, thus raising issues of cultural differences. According to Hubbell (2003) conducting field work abroad is notoriously difficult; Karansios (2008) agrees and suggests that the researcher should be well-versed in the geography, history, politics and culture of the location before undertaking cross-national field research. With this mind, it was necessary to be aware of several cultural traits deemed particularly important and prevalent in Mexican society which could potentially affect the research (Daymon and Hodges, 2008).

- i. *Simpatia*: 'The word has no equivalent in English but refers to a permanent personal quality where an individual is perceived as likeable, attractive, fun to be with, and easy going. An individual who exhibits *simpatico* shows certain levels of conformity and an ability to share in others feelings, behaves with dignity and respect towards others, and seems to strive for harmony in interpersonal relations...' Triandis *et al* (1984; 1363). It was important to project the elements of *simpatia* throughout the interview process in the form of friendliness, courtesy, respect, empathy and good-manners.
- ii. *Palanca* and social hierarchy: It can be roughly translated as 'leverage' or to put it simply- 'you scratch my back and I'll scratch yours.' "Palanca refers to the power derived from extensive interpersonal connections and networks of relationships which expand into organisational, social and family life (Daymon and Hodges, 2009: 431). It is useful to attempt to develop personal contacts with *palanca*, for they may be able to provide access to essential participants who are difficult to locate. In this case, a friend of the researcher with considerable *palanca* was able to secure an interview with a representative from SECTUR.
- iii. *Confianza*: This refers to a 'bond of mutual trust' (Velez-Ibanez, 1983:10): 'By adhering to the cultural merit that focuses on people, good relationships are built and *confianza* is earned' (Cheng, 2010; 553). The researcher should seek to project the elements of *simpatia* to promote *confianza*.
- iv. *Flexibilidad contra al incertidumbre*: dealing with uncertainty with flexibility. This signifies that in Mexico it is beneficial to embrace the notion of flexibility as a means of being able to adapt due to constraints posed by bureaucracy, delays, traffic congestion. Because of this, Mexicans are considered to be polychronic (flexible with time). The researcher had to be aware that in an interview situation Mexican participants, in an effort to become familiar, may

want to spend some time beforehand speaking about family and other interests. While the researcher may feel impatient and wish to continue with interview, attempts to hasten proceedings may be construed as rudeness thus potentially affecting the quality of the interview. Mexicans are flexible with their time and they expect their 'guests' to also be adaptable and amenable.

Another concern was the fact that Mexico is a Spanish speaking country, which raised issues relating to the difference in language between researcher and participant. According to Lopez *et al* (2008: 1729) 'Currently cross-cultural qualitative studies conducted in languages other than the investigator's primary language are rare and especially challenging because of the belief that meaning- which is the heart of qualitative analysis- cannot be sufficiently ascribed by an investigator whose primary language differs from the study's participants'. Consequently Lopez *et al* (2008: 1729) propose a new method, based on Brislin's (1970,1980) translation model, which 'more accurately conveys the true meaning of the participant's experience...and opens doors to researchers interested in conducting research in a language other than their own, while at the same time ensuring the reliability and validity of study data'. Simply put, the method argues that rather than directly transcribing from the source language into the target language (i.e. Spanish into English) which is the prevalent method, it would be more appropriate to:

1. Transcribe the interview verbatim in the source language.
2. Transcribe into the target language.
3. Back-translate to look for any inconsistencies which can then be further investigated.
4. All of this should be done by a team of experts.

Therefore, the interviews which were conducted in Spanish were first transcribed into Spanish and then English and then back-translated from English into Spanish to check for inconsistencies. If the researcher was unsure of the exact meaning of a word or phrase Mexican family or friends were available to help (the team of experts). The same technique was used to transcribe and translate documents written in Spanish.

4.6.2.3: Interview locations

The interviews with the respondents from the Ministry of Tourism (SECTUR), the Mexican Tourism Board (CPTM) and the Mexico City Tourism Board took place at their respective offices in Mexico City. The interview with a respondent from the National Chamber for the Restaurant and Food Industry took place at the establishment's Mexico City offices. There were two interviews with tourism academics, one being

conducted at the Universidad Autónoma del Estado de Mexico in Texcoco in the State of Mexico, while the other took place in a restaurant in Mexico City. Other respondents were also interviewed in various cafes and restaurants in Mexico City. An interview with the Sales Manager from Real Resorts Hotel group took place at the Real Resort hotel in Playa del Carmen and two more interviews were performed at a business premises and a hotel in Cancun. The average length of the interviews was 35 minutes.

4.6.2.4: Interview questions

The interviews questions were drawn from the research frameworks, namely, the limitations of contemporary tourism crisis and disaster management models and tourism crisis management from a complexity theory perspective, with the intention being to fulfil the research objectives and answer the research questions. The questions were devised specifically for each individual participant so as to encourage him or her to impart their perceptions of the situation. For example, the interviews with the SECTUR representatives, the CPTM representative and the Secretary of Tourism for Mexico City provided an opportunity to gather first-hand information regarding the existence or non-existence of a health related tourism crisis management plan, the structure and culture of the industry, the impacts of the crisis, the main challenges facing the authorities, the subsequent response of the authorities and the lessons learned from the crisis. The interviews with the business owner, the hotel manager and respondents from the National Chamber for the Restaurant and Food Industry, the National Confederation of Mexican travel agents and Vantage Strategy Consulting, allowed the crisis to be seen from a different perspective and provided information concerning the existence or non-existence of business and sector specific crisis management plans, impacts of the crisis on the industry ,the challenges facing individual businesses and sectors of the tourism industry and their view of the government response and overall situation. The interviews with the tourism academics provided an opportunity to explore more difficult concepts in greater detail, as professional opinion could be sought regarding the limitations associated with tourism crisis and disaster management models and the application of complexity theory to tourism crises and disasters. The academics were also useful in providing an opinion regarding the state of Mexican tourism in general and the historical background of Mexican tourism.

4.6.3: FMD crisis

4.6.3.1: Selection of interview respondents

The technique of purposeful sampling was again used to select potential interview participants. A number of participants were identified by noting the names of key players mentioned in official documents and publications and academic articles. They

were contacted by email or telephone and in the majority of cases they agreed to an interview. Meanwhile, a large number of tourism business owners in affected areas were identified from an internet search. They were contacted by email and telephone and asked if they would like to participate in the study. Many failed to respond or they politely declined due to the fact that they had not been in business in 2001; however, crucially, a number did agree to an interview. The interviews were conducted in January and February, 2013.

Again, given an assurance of anonymity, the research does not identify the participants by name, instead identifying them by place of work/ role (at the time of the crisis) and the location/ date of the interview.

Table 4.7: FMD crisis respondents

Respondent	Place of work/role	Location/ date of interview
FMR1	Cumbria / guest house owner	Cockermouth, 21 st February, 2013
FMR2	Skipton / hotel owner	Skipton, 25 th February, 2013
FMR3	English Tourism Council / Chief Executive	Kenilworth, 23 rd January, 2013
FMR4	British Tourist Authority, Director of Marketing	London, 1 st February, 2013
FMR5	Kendal / guest house owner	Kendal, 5 th February, 2013
FMR6	Cumbria Tourism Board / Marketing Director	Stavely, 21 st January, 2013
FMR7	Windermere / guest house owner	Windermere, 31 st January, 2013
FMR8	Grasmere / garden centre owner	Grasmere, 19 th February, 2013
FMR9	Wales Tourist Board / Director of Marketing	Cardiff, 25 th January, 2013
FMR10	Ravenglass / farm cottage owner	Ravenglass, 20 th February, 2013

4.6.3.2: Interview preparation

As the interviews were to take part in Britain, the researcher's home country, the cross cultural and language issues that were present for the Mexico interviews were not relevant. Nonetheless, it was still important to consider every aspect of the interview and to deliberate how each participant can be guided, by means of the interview questions and the approach and attitude of the researcher, into providing information that will assist in answering the research questions. Each participant's association with the crisis was carefully considered which affected both the choice of questions and the general attitude of the researcher. For example, a different tack was necessary when

interviewing a small farm business owner who had suffered emotionally and economically during the FMD outbreak than when interviewing policy makers from national tourism organisations. This is not to say that policy makers were not emotionally affected as a result of the outbreak, but in different ways. Suffice to say that, as with the Mexican interviews, sensitivity was called for throughout the interview process.

4.6.3.3: Interview locations

The interviews with the respondents from the British Tourist Authority, the Cumbria Tourist Board and the Welsh Tourist Board took place at their offices in London, Staveland and Cardiff respectively. The interview with the respondent from the English Tourist Council was conducted at an address in Warwickshire. The other interviews were conducted in the respective establishments associated with the respondents in the Lake District, Cumbria and Yorkshire. The average length of the interviews was 45 minutes.

4.6.3.3: Interview questions

The interview questions were designed specifically for each individual with the objective being to (i) gather information regarding the causes and impacts of the crisis and the subsequent response and recovery and (ii) to answer the research questions below:

- Were the proposed limitations associated with contemporary tourism crisis management models manifested during the FMD crisis in the UK?
- Were elements of complexity theory manifested in the case study?
- Does the case study suggest that a complexity theory based perspective offers a more appropriate approach to destination crisis and disaster management than current theory?

The process is demonstrated in Table 4.8. The left-hand column indicates the general objective of the interview question (in blue). The right-hand column illustrates the specific information sought (in blue) and the specific question used to obtain this information.

Objective of research question	Research questions
<p>Description of the FMD crisis, emphasising the causes, impacts, response and the recovery.</p>	<p>How did the crises begin? When did you first become aware of the foot and mouth outbreak?</p> <p>What were the impacts? What impact did the foot and mouth outbreak have on tourism in England?</p> <p>How did the authorities respond? Was there a crisis management plan? What were the main challenges facing the Welsh tourism industry at the time of the outbreak and what actions were taken? Did the Wales tourist board have a crisis management plan in place before the outbreak began? If so, can you describe it?</p> <p>When did recovery begin? When did you begin to see an improvement in the situation? When was the crisis officially over and what was the state of the industry? When do you think the crisis was finally over? When was business back to normal? Do you think that the region is now better equipped to handle a crisis?</p>
<p>Were the proposed limitations associated with contemporary tourism crisis management models manifested during the FMD crisis ?</p>	<p>How successful were the recovery strategies employed by the authorities? In your view, did the Wales Tourist Board respond to the crisis effectively?</p> <p>Did the authorities coordinate with the emergency services? What can be done to improve coordination and cooperation, particularly during the emergency phase of a crisis?</p> <p>Was the crisis predicted by the tourism authorities? The foot and mouth outbreak appeared to catch everybody by surprise. Do you think the foot and mouth crisis could or should have been predicted?</p> <p>Did the crisis pass through the crisis lifecycle? How did the crisis differ from other crises? In the minutes of evidence taken before the Culture, Media and Sports Committee on 26th April, 2001, you explain that while some part of Wales were seeing a significant return of visitors following Easter, 2001, other locations such as rural Wales, Anglesey, Powys and Monmouthshire were still severely affected. Did the fact that the crisis was on-going (as opposed to a hurricane or a flood which is over relatively quickly) and non-uniform (in that it affected a large area at differing levels of seriousness), make it particularly complex and difficult to handle?</p> <p>Were there any specific cultural issues which contributed to the crisis or affected the response? (Culture of the industry) It has been suggested that the best means to prepare a destination for a crisis is by attempting to 'transform' the destination into a 'learning tourism area' or 'region' in which the industry stakeholders collaborate, interact and cooperate in order to fully promote a 'shared vision' of where they want their destination to be. The idea is to form partnerships, networks and clusters to nurture innovativeness, autonomy and flexibility which ultimately can shape a 'mind-set' and a certain resilience which caters for planned and unplanned change (crises and disasters) as a natural organisational process. Does the Wales Tourism Board do anything in order to foster and encourage such an approach? What is done to encourage cooperation and collaboration between tourism related businesses? How are the Wales Tourist Board's values and principles communicated throughout the Welsh tourism industry?</p>

Objective of research question	Research questions
<p>Were the proposed limitations associated with contemporary tourism crisis management models manifested during the FMD crisis ?</p>	<p>(Structure of the industry) Does the fact that the BTA was responsible for the marketing of Wales abroad complicate matters? Should the Wales Tourist Board have been responsible for marketing Wales overseas?</p> <p>(British government's relationship with tourism) It has been suggested that the government appeared to favour the agricultural industry over the tourism industry, evident by the enforced closure of the countryside and by the amount of funding given to the agricultural industry compared to the tourism industry. Did this severely limit the tourism recovery effort in Cumbria?</p> <p>The government apparently believed that tourism is a successful industry and therefore did not need help from the public purse. Hence the ETC bid for £35 million was refused and only £3.8 million was received. What was your view on this government stance at the time? Are crisis plans doomed to fail without sufficient funding?</p> <p>Were there any specific political issues which contributed to the crisis or affected the response? The government apparently believed that tourism is a successful industry and therefore did not need help from the public purse. Hence the ETC bid for £35 million was refused and only £3.8 million was received. What was your view on this government stance at the time?</p> <p>Were there any specific coordination and cooperation issues? Were there problems of coordination with other agencies involved in the crisis, such as MAFF, DEFRA or the health services?</p>
<p>Were elements of complexity theory identified in the FMD crisis?</p>	<p>Is there evidence relating to the manifestation of:</p> <p>The edge of chaos: How was the industry organised and functioning? It has been suggested that the best means to prepare a destination for a crisis is by attempting to 'transform' the destination into a 'learning tourism area' or 'region' in which the industry stakeholders collaborate, interact and cooperate in order to fully promote a 'shared vision' of where they want their destination to be. The idea is to form partnerships, networks and clusters to nurture innovativeness, autonomy and flexibility which ultimately can shape a 'mind-set' and a certain resilience which caters for planned and unplanned change (crises and disasters) as a natural organisational process. The destination management organisation, in this case the Cumbria Tourism Board, has a pivotal role to play in the development of a 'learning region'. Can you tell me any steps that the Cumbria Tourism Board is taking in order to foster and encourage such an approach? What is done to encourage cooperation and collaboration between tourism related businesses? How are the Cumbria Tourism Board's values and principles communicated throughout the Cumbria tourist industry?</p> <p>The butterfly effect: What was the cause of the crisis? Do you think that it was in part a media inspired crisis? Did the government also play a part in creating a crisis for the tourism industry by closing down the countryside?</p> <p>Bifurcation: Did the industry appear to be entering a phase transition? At what point did it become clear that this was a serious crisis which would have far-reaching consequences?</p>

Objective of research question	Research questions
<p>Were elements of complexity theory identified in the FMD crisis?</p>	<p>Cosmology: Were there episodes of cosmology? When did you realise that it was going to become a serious problem for the tourism industry? What was the effect on your business? Did you ever feel that you wouldn't be able to cope?</p> <p>Self-organisation: Was self-organisation evident? What action did you take when the crisis was at its peak to ensure the survival of your business? Did you note any examples of these kinds of businesses using innovative methods in an attempt to organise themselves without outside help?</p> <p>Were strategies formulated to encourage self-organisation? It has been suggested that destination management organisations take the role of 'knowledge brokers' in facilitating the flow of information between interested parties. This can be done by bringing people together and enabling them to create and share new ideas, thereby supporting the creation and flow of knowledge. Is this done within Cumbria? Is this done to support crisis planning, for example in the form of scenario planning?</p> <p>Strange attractors: Was there evidence of the element of strange attractor? Did the foot and mouth crisis provide the opportunity for any novel strategies, which would perhaps be considered risky in times of equilibrium but ultimately paid off and proved to be successful?</p> <p>Emergence: Was the industry ultimately improved by the crisis? What positive changes came about as a result of the FMD outbreak? In the minutes of evidence taken before the Culture, Media and Sports Committee on 26th April, 2001, you state: If there is a silver lining to this, it is that people are recognising the significance and importance of tourism to the economy generally and specifically to the rural economy. I know that the tourist industry in Wales and elsewhere now wants a much stronger voice for tourism. Did the foot and mouth crisis lead to improvements for the Welsh tourism industry?</p> <p>Lock-in effect: Was there evidence of the lock-in effect? When do you think the crisis was finally over? When was business finally back to normal? Did your 'old' customers return quickly?</p>

Objective of research question	Research questions
<p>Does the FMD crisis suggest that a complexity theory based perspective offers a more appropriate approach to destination crisis and disaster management than current theory?</p>	<p>How is the industry organised? Tomorrow's Tourism identified 5 key areas for English Tourism Council (ETC) to focus upon; research, ensuring quality, promoting best practice and innovation, overseeing systems for data collection and analysis and acting as a voice for successful sustainable tourism. Was the ETC also responsible for any kind of crisis planning before the FMD outbreak?</p> <p>How did this affect the response? Were you aware of coordination problems with other agencies involved in the crisis, such as MAFF/ DEFRA or the health services? Were there coordination problems between ETC, the British Tourism Authority and the Regional tourism organisations?</p> <p>Would the response have been improved if the industry had been organised as a learning destination, effectively in the edge of chaos state? It has been suggested that the best means to prepare a destination for a crisis is by attempting to 'transform' the destination into a 'learning tourism area' or 'region' in which the industry stakeholders collaborate, interact and cooperate in order to fully promote a 'shared vision' of where they want their destination to be. The idea is to form partnerships, networks and clusters to nurture innovativeness, autonomy and flexibility which ultimately can shape a 'mind-set' and a certain resilience which caters for planned and unplanned change (crises and disasters) as a natural organisational process. Can this be done in real life or will underlying issues such as competition, mistrust and lethargy throw an inevitable spanner in the works?</p>

Table 4.8: The objectives of the interview questions

4.7: Data analysis /interpretation

4.7.1: Coding

The interviews were recorded using a digital voice recorder and immediately transcribed so that manual coding could begin, as Miles and Huberman (1994) propose that analysis should begin during the data collection stage. According to Bryman and Bell (2007: 586), coding 'entails reviewing transcripts and/or fieldnotes and giving labels (names) to component parts that seem to be of potential theoretical significance and / or that appear to be particularly salient within the social worlds of those being studied'.

The analysis was guided by the three phases of coding suggested by Strauss (1987). This consists of open coding, in which the researcher reviews the data and searches for recurring themes or concepts; axial coding which involves searching 'for relationships between the open codes' (Jennings: 2010: 2009); and selective coding in which specific codes are selected as part of the 'process of integrating and refining the theory' (Strauss and Corbin, 1998: 143). To begin with, using the technique of *a priori* coding, a set of categories were developed before examining the data, derived from the conceptual frameworks of the thesis (limitations of contemporary models and complexity theory) and the research objectives and questions. These categories were labelled unpredictability, prescriptive guidelines, one-size-fits all plans, coordination issues, complex adaptive system, edge of chaos, butterfly effect, bifurcation, cosmology, strange attractor, self-organisation, fractals, emergence and learning destination. Consequently, the first analysis of an interview transcript involved searching for evidence which would fit into these categories in the form of concepts. An example can be found below:

MAFF not knowing what the, well, the County Council not knowing what the tourism industry needs were and DEFRA acting in a totalitarian way, no consultation; there were a lot of agencies around the table to try and coordinate what the different aspects were and certainly that became apparent quite quickly that a high level decision making group needed to be established to get things moving again and there was distress and misinterpretation, frustration and angry words spoken because of the different standpoints of the different organisations. We were falling out with the County Council because they had acted on this mandate to say that you close every footpath in the county when there was no reason to- the outbreak could be 30 miles away, so what was the issue? So the logic had been extended too far. Eventually things were negotiated and positions understood...So yes, frustrating time, co-ordination big, big deal. Coordination was the massive crisis. FMR6

In this extract from an interview transcription there are examples of:

Unpredictability: *We were falling out with the County Council because they had acted on this mandate to say that you close every footpath in the county when there was no reason to...*

Prescriptive guidelines: *they had acted on this mandate to say that you close every footpath in the county...*

Coordination issues: *So yes, frustrating time, co-ordination big, big deal. Coordination was the massive crisis...*

Cosmology: *there was distress and misinterpretation, frustration and angry words spoken...*

Emergence: *Eventually things were negotiated and positions understood...*

This was then arranged in a table form:

Table 4.9: A *Priori* coding

Category	Concept
Unpredictability	Closing of footpaths not predicted
Prescriptive guidelines	Acting on mandate
Coordination issues	Evidence that coordination was a major problem
Cosmology	Evidence of cosmologic episodes
Emergence	Eventually solutions were found

As more evidence relating to the pre-set codes was found during data analysis the right-hand 'concept' column inevitably became more substantial.

Following this initial, *a priori* analysis, the data was examined again, this time searching for emergent, grounded codes that were different from the *a priori*, or pre-set codes. The procedure slightly differed as this time the concepts were discovered first and then later grouped into categories, or themes. For example, the extract below demonstrates evidence relating to the criticism that variances between business organisations and tourism destinations are not considered in conventional models, a theme not previously considered when determining the pre-set codes.

We had a very busy foot and mouth period. The authorities booked all our rooms, en-block, and sent a succession of herdsman and vets assistants to stay with us. The rooms were paid for even if they were unused. Please can we have another epidemic?

FMR5

This data unearthed the concept that impacts differed during the FMD crisis and, consequently, some stakeholders were actually quite content with the situation, as opposed to others who were suffering hardship because they had been affected negatively. Therefore, this concept was unexpectedly grounded from the data, as opposed to predetermined in advance. It was primarily coded under the label 'Impact exceptions', as was the following extract:

...all of a sudden had hotels full of DEFRA officials or army officials, all sorts of people trying to resolve the problem, so basically they were booked up for weeks on end making seriously good money so certain sectors or certain places seemed to get a benefit instantly ...FMR6

However, during the process of axial coding, in which relationships began to be developed among open codes, it was possible to develop a theory which argued that tourism crisis models, based on business/ organisational crisis management, would not always be appropriate for a tourism destination. This subsequently led to the third and final step of the coding process, in which the process of selective coding (selecting the core category to be used in the thesis) finally drew together these two examples of 'impact exceptions' under the thematic heading 'Difficulty of implementing a collective strategy due to different perspectives'.

This section provides two examples of the analysis process undertaken which allowed the identification of thematic patterns from the data. Occasionally, this involved the procedure of allocating data to pre-set codes, while on occasions it involved the recognition of a new element or concept vital to the research, a search for comparisons and the assignment of new, emergent 'grounded' categories and themes. The same process was replicated numerous times as 'core' categories were established and others discarded. The established themes were consequently used to fulfil the research objectives and answer the research questions.

4.8: Documents

A number of documents were used as a means of supporting the primary data gained in the interviews. Documents are particularly useful as a means of 'balancing' the data and provide a more varied, broad approach to the evidence (Hakim, 1982). As Hodder (1994: 393) stresses, 'such texts are important for qualitative research because, in general terms, access can be easy and low cost, because the information provided may differ from and may not be available in spoken form, and because texts endure

and thus give historical insight'. Yin (2003: 87), meanwhile, insists that 'because of their overall value, documents play an explicit role in any data collection in doing case studies'. He lists their strengths: (i) stable (they can be evaluated as often as necessary); (ii) unobtrusive (were created independently of the case study); and, (iii) exact (contain names and details of events). Furthermore, Stake (1995: 68) is also adamant that a documentary review is an integral part of case study research and advises that such data may unearth 'unexpected clues.'

However, similar to case studies and semi-structured interviews, the use of documents also has limitations (see Table 4.10).

Table 4.10: Documents: Limitations and justifications

Limitations of secondary data	Justification
A researcher may presume that a document contains the 'unmitigated truth'; however, they often reflect the unknown bias of the author (Yin, 2003: 87).	The researcher must bear this in mind and be aware that 'the documentary evidence reflects a communication among other parties attempting to achieve some other objectives' (Yin, 2003: 87).
Statistics can be 'massaged' as a means of influencing data (Finn <i>et al.</i> , 2000:58).	As above, the researcher must be aware of this.
The original data may have been of poor quality.	The researcher should take care to ensure that the secondary data comes from a reliable source.

4.8.1: FMD Crisis

The principal method of finding documentation related to the FMD case study was by an internet search. Documents located this way included:

- i. The Fourth Report. Tourism: the hidden giant and foot and mouth: The Select Committee of Culture, Media and Sport (including the minutes of evidence) (May, 2001).
- ii. National Tourism Recovery Strategy: Department of Culture, Media and Sport (11th May, 2001).

- iii. Report of the Rural Task Force: Tackling the impact of the foot and mouth disease on the rural economy DEFRA (October, 2001).
- iv. Foot and Mouth Disease, 2001: Lessons to be Learned Inquiry Report by Iain Anderson (July, 2002).
- v. Cumbria foot and mouth disease inquiry report' Cumbria County Council (2002).
- vi. Tackling the impact of the Foot and Mouth disease on the rural economy: Report of the Rural Task Force: Department for Food, Environment and Rural affairs (2001).
- vii. Origin of the UK Foot and Mouth disease epidemic in 2001: Department for Food, Environment and Rural affairs (2002).

The publication entitled *The Structure and Strategy for Supporting Tourism* prepared by the Culture, Media and Sport Committee (2002) offered valuable information, as did two internal BTA documents *Tourism to Britain* (2001) and *FMD PR Response and Recovery Programme'* (2002) provided during an interview with a representative from the British Tourist Authority.

A number of academic articles were also very useful. They were especially valuable as a means of compiling a chronological sequence of events, evaluating the state of British tourism, measuring the impacts of the crisis on the tourism industry and to evaluate the response of the authorities.

4.8.2: H1N1 Influenza crisis

The documents were chosen carefully as a means of adding to and balancing the data which was obtained from the interviews. An internet search provided access to various documents which were mainly useful in compiling a chronological sequence of events, evaluating the past and current state of Mexican tourism, and measuring the impacts of the crisis on the tourism industry and the response of the authorities. The documents included:

- i. Numerous Information bulletins provided on the SECTUR website which described the impacts of the crisis on various destinations and the measures being taken by the authorities.

- ii. A document prepared by the Economic Commission of Latin America (CEPAL) entitled *Evaluación preliminar del impacto en México de la Influenza AH1N1* (Preliminary investigation of the impact of AH1N1 influenza on Mexico). This document, available online, gives specific information regarding the impacts of the H1N1 influenza crisis, including the decline in international visitor arrivals and hotel occupancy and the promotional campaigns put into effect by the authorities.
- iii. A document prepared by the Centre of Social Studies and Public Opinion (CESOP) called *2009, un año de crisis para el turismo* (2009- a year of crisis for tourism). This document, also available online, investigates the impacts of the worldwide economic recession and the H1N1 influenza crisis on Mexican tourism.
- iv. UNWTO world tourism barometers, available online, give regular information and data from individual destination countries and also provide evaluations from a panel of tourism experts. The UNWTO 'Tourism 2020 Vision' provides a long-term forecast of tourism development up to the year 2020.
- v. WEF travel and tourism competitiveness reports measure the factors which potentially make individual countries an attractive business development proposition, rather than the factors which make it an appealing destination for tourists.

Other documentation

- vi. Copies of the quality Mexican newspaper '*El Universal*' supplied information concerning the chronological impacts of the Influenza crisis. These were used to construct Table 6.2.
- vii. A PowerPoint document provided by a respondent from the National Confederation of Mexican Travel Agents was an important addition to the data. The document contained the CPTM tourism crisis management plan (Table 6.3) which details the planned response of the tourism authorities.

4.8.3: Document analysis

The documents were analysed using the same manual coding analysis technique as was used for the interview data. The SECTUR bulletins and newspaper reports from Mexico were first printed and translated. The factual information from the bulletins and the reports were compared to the factual information given in the interviews but no discrepancies were found to be present.

4.9: Ethical considerations

Tourism researchers have an ethical responsibility to society, the scientific community and to the self; however, the primary responsibility of a tourism researcher is to protect the rights of those individuals taking part in the research (Jennings, 2010). Thus, according to Veal (2006: 70), the general principles of research ethics are:

- i. The research subject should be safe from harm.
- ii. Subjects should take part off their own accord.
- iii. The subjects should take part under informed consent.

In regards to the first principle, it was considered that while there was no particular danger of physical harm in the interview locations, there was a possibility of psychological harm to a respondent recalling traumatic personal recollections of the FMD crisis or the H1N1 Influenza crisis. For this reason the following paragraph was included in the information sheet sent to all participants:

What risks are involved? You may become distressed if you are recalling what was for you a personally difficult/disturbing time. Please bear this in mind when considering participating in an interview. Your personal involvement will be treated sensitively.

The information sheet corresponded to the 'informed consent' checklist provided by de Vaus (2002: 66), in that it supplied the participants with information concerning the identity of the researcher, purpose of the research and what is involved, the benefits to be gained from the research, why and how they were chosen, the fact that participation is voluntary and how the findings will be used.

This research met with the ethical clearance requirements of the University of Lancashire's School of Sport, Tourism and the Outdoors. Before each interview a consent form was provided to the participants, which confirmed that they had read and understood the information sheet, were aware that their participation was voluntary and that they could withdraw at any time, that the information could be used in future reports, articles or presentations and that their wish to remain anonymous would be respected.

4.10: Limitations of the methodology

The limitations commonly associated with the use of case studies, semi-structured interviews and the use of secondary data has been considered above in tables 4.5, 4.6 and 4.10. Even so, it is necessary to consider these issues in slightly more detail as

they specifically relate to this research. In quantitative research the terms reliability and validity are used to measure the quality of the research; however, qualitative research merits its own distinctive approach. Accordingly, Denzin and Lincoln (2003) propose that the 'trustworthiness' of qualitative research be measured by its credibility, transferability, dependability and authenticity.

Credibility: According to Bryman and Bell (2007: 411) assuring credibility means making certain 'that research is carried out according to the canons of good practice *and* submitting research findings to the members of the social world who were studied for confirmation that the investigator has correctly understood that social world'. While being aware of the concept of research validation and attempting to employ it with several interview participants, the researcher encountered practical difficulties in that the respondents were unfortunately unable to partake in this exercise for various reasons. Consequently, according to Denzin and Lincoln's (2003) criteria of trustworthiness, the research was limited in this respect. Nonetheless, in an attempt to add to the research credibility, secondary sources of data were utilised as a means of 'confirming' the evidence gained in the interviews.

Transferability: Qualitative research is typically exclusive to the study in question. That is, questions can be raised as to whether the findings would be applicable in another context or the same context in a different time or circumstances (Lincoln and Guba, 1985). Notwithstanding, Lincoln and Guba (1985) insist that the issue of applicability has been addressed as long as the researcher provides a thick description and data to *allow* comparison. It is argued, therefore, that this research does provide a rich 'database for making judgements' (Bryman and Bell, 2007: 413), thus making possible the transfer of its findings to other similar situations or contexts.

Dependability: To ensure dependability (reliability in quantitative research), Bryman and Bell (2007: 414) suggest that 'complete records are kept of all phases of the research process- problem formulation, selection of research participants, fieldwork notes, interview transcripts, data analysis decisions, and so on- in an accessible manner'. Also, peers can act as 'auditors', to ensure that these procedures have been followed. In the case of this research, a manageable research strategy was adhered to and records of all processes were maintained and kept available. Furthermore, the research supervisor (in the role of 'auditor') was available throughout the course of the research to confirm that the correct procedures were being followed and to provide advice and guidance.

Confirmability: In order to establish confirmability in qualitative research it is necessary to ensure neutrality (Krefting, 1991). As with the criteria of dependability, an audit is viewed as a suitable strategy of ensuring confirmability: 'this strategy involves an external auditor attempting to follow through the natural history or progression of

events in a project to try to understand how and why decisions were made' (Krefting, 1991: 221). As mentioned above, in this case the research supervisor acted as an 'auditor', ensuring that the researcher's 'personal values or theoretical inclinations' did not 'sway the conduct of the research and findings deriving from it' (Bryman and Bell, 2007: 414).

4.11: Summary

Having revisited the aims, objectives and research questions, it was decided that an interpretivist approach best suited the researcher's philosophical outlook and the demands of the thesis. A qualitative approach was adopted in the form of two case studies so as to enable the researcher to gain the subjective realities of those directly involved in the two crises. Data were collected by conducting a number of semi-structured interviews, the transcripts of which were analysed along with relevant documents relating to the particular crisis. The results will be narrated and discussed in the following two chapters, before comparisons are drawn and conclusions are reached in the final chapter.

Chapter 5

The Foot and Mouth disease tourism crisis

'Despite its size, tourism has had a low profile both economically and politically; it is the hidden giant of the British economy' Culture, Media and Sports Committee (2001a)

5.0: Introduction

The purpose of this chapter is to explore the limitations of contemporary tourism crisis and disaster management models, and the benefits which could be gained by adopting a complexity theory perspective to the management of tourism crises and disasters, in the specific context of the 2001 FMD tourism crisis. It begins by providing a brief history of the British tourism industry before discussing the events surrounding the FMD outbreak. It notes that the tourism crisis was caused by the actions of the government and the reaction of the media, and aggravated by the structural and cultural weakness of the tourism industry and the particularly complex nature of the crisis.

Thereafter, the chapter continues by considering the limitations of contemporary models as discussed in Chapter 2 of this thesis. It establishes that such limitations were indeed present in the crisis and, therefore, would have prevented the successful application of contemporary tourism crisis models. Likewise, the chapter notes the occurrence of several complexity theory elements during the course of the FMD crisis, from the butterfly effect to strange attractors and emergence. McMillan's (2008) *Edge of Chaos Assessment Model* is employed to compare a destination governed using traditional management controls compared to one using complexity theory strategies and, finally, the chapter concludes by considering how the response might have been improved had the tourism industry of 2001 been managed using complexity theory strategies and, therefore, functioning as a complex adaptive system on the edge of chaos.

5.1: Background to the FMD crisis

A brief history of the British tourism industry will provide a background and a context to the events of 2001. Historical accounts of tourism often refer to the medieval pilgrim as a 'precursor to the modern tourist and traveller' (Kaelber, 2006: 29). 'Spiritual' foreign

destinations such as Jerusalem, Rome and Lourdes became popular pilgrimage choices with the British nobility; however, the vast majority of British pilgrims were not of the upper social classes and thus tended to visit local places of mystical value in what could be heralded as the first instance of domestic tourism in Britain. Chaucer's famous literary work, *The Canterbury Tales*, concerns a group of such pilgrims travelling from Southwark to Canterbury Cathedral.

Just as Jerusalem, Rome and Lourdes had become popular with the Pilgrimage nobility, similar attractive, sophisticated destinations such as Paris, Turin, Geneva and Vienna became the vogue with the young British aristocrats of the seventeenth and eighteenth centuries. The Grand Tour, as it was known, is defined by Towner (1985: 301) as: 'A tour of the principal cities and places of interest in Europe, formerly supposed to be an essential part of the education of young men of good birth or fortune'. Unlike the less privileged pilgrims who undertook journeys within the confines of Britain as an alternative to travelling abroad, there was no substitute to the Grand Tour. Those less well-off, the vast majority, were simply not able to do such things. A domestic Grand Tour did not exist and poor people did not indulge in holidaymaking.

The situation was to change somewhat in the nineteenth century as the industrial revolution and the development of railways brought about a range of social and technological transformations. Towner and Wall (1991) warn of conveniently drawing parallels with such changes and the evolution of the tourism industry but it does appear that a rapid shift in the character of tourism development was primarily driven by a working class demand previously unheard of. British seaside resorts had become popular with and primarily catered for the upper classes but they soon, of necessity, were forced 'to meet the needs of a working class who too sought escape from the towns' (Ryan, 2003: 10). Walton (1981: 249) describes the situation: 'Victorian seaside resorts were among the fastest-growing English towns in a period of rapid urbanization; and by the later nineteenth century those which were expanding most spectacularly were also having to come to terms with changing patterns of demand for their services. From the 1870s onwards, rising living standards released a new flood of visitors. At first, tradesmen and white collar workers predominated, but the skilled worker and his family were soon strongly in evidence at many resorts, stimulating the development of new kinds of retail and entertainment provision and posing problems of public order and marketing strategy for those in authority'. Walton (1981: 249) also notes how 'the earliest railway excursions to the coast both responded to and stimulated this wide range of demand'. So began the British working-class domestic holiday, particularly evident in Lancashire, Yorkshire and North Wales.

As Ryan (2003: 14) further explains, this pattern continued into the twentieth century: 'In the period prior to the First World War, there was, on the whole, a continuation of trends that had commenced thirty years earlier. The tours of Thomas Cook and its competitors continued to spread even further and in greater numbers, but still primarily using steamers and trains. The seaside resorts on the whole continued to flourish, whilst clubs and outings of various sorts remained a feature of leisure and holidaying'. Another forms of holidaymaking which gained in popularity following the First World War took place in 'plotlands', small plots of land found in the countryside away from the city ' in which relatively makeshift housing was developed .This was particularly prominent in the London region (Hardy, 1990). Predominantly working class, the idea appealed to those wishing to escape the claustrophobia and greyness of the city and although the new form of transport, the automobile, was still a luxury for a few, the plotlands were readily accessible, as Hardy (1990) notes, by railway, charabanc or motorcycle and tandem.

The period of time from 1919 to 1939 is described by Middleton and Lickorish (2007:2) as the 'transition away from the Victorian Age toward the new world of greater individuality, mobility and innovation in most spheres of daily life, and especially in leisure and travel.' The Holidays with Pay act of 1938, depicted by Middleton and Lickorish (2007: 4) as 'arguably the most significant government decision influencing travel and tourism in the twentieth century', advanced tourism's progress by entitling workers to paid leave.

Governmental interest in inbound tourism had become evident as the 'Come to Britain' movement of 1926 brought focus upon the potential foreign tourist. The Travel Association of Great Britain and Ireland was formed in 1929 with a grant of £5000. However, significantly, this was cut to £4000 following the Wall Street Crash. According to Middleton and Lickorish (2007), this was an early example of the government's lack of perception regarding the economic and social potential of tourism, an accusation to be repeated by numerous critics at the dawn of the following century during and after the foot and mouth crisis.

The Second World War brought a halt to both international and domestic tourism and the post war period saw an understandable government emphasis on the manufacturing industry as Britain attempted to revive its battered economy and infrastructure.

Following the Second World War, Britain entered what Demetriadi (1997: 51) refers to as 'the last golden decade of seaside resorts'. It was a decade of full employment in which rail travel was still dominant and seaside resorts 'enjoyed more or less a captive market'. Nonetheless, many changes were underway which would ultimately transform the domestic British tourism industry. For example, growing prosperity, improvements in road communications and the increase in car ownership encouraged independent trips. Tourists were now able to diversify their travel options and enjoy the 'intrinsic qualities' (Sharpley and Sharpley, 1997) of the countryside, which encouraged the growth of rural tourism.

As patterns of domestic tourism changed, so too did patterns of inbound and outbound tourism. This was due to vast improvements in aircraft technology which served to stimulate the development of the overseas package tour (Youell, 1998). Middleton and Lickorish (2007: 75) describe the 1950s as the 'dawn of mass tourism abroad, which was reflected in the increase of outbound tourists over the next two decades, which grew from one million in 1953 to eight million in 1969. Meanwhile, the number of foreign tourists entering Britain increased from one million in 1955 to nearly six million in 1969 (Middleton and Lickorish, 2007).

The period of time from 1969 to 1989 is when 'the key patterns and characteristics of tourism emerged as we still see them today in Britain' (Middleton and Lickorish, 2007: 80). These characteristics included:

- The decline of the seaside resorts.
- Domestic tourism shifting to the countryside and heritage towns and cities.
- A vast increase in outbound and inbound tourism.

These characteristics can be particularly observed when considering the British tourism industry in the year 2000. Technological, social and cultural change had facilitated the shift in domestic tourism from 'seaside resort' tourism to rural and heritage tourism, as the British embraced the countryside as a 'multi-purpose resource' (Sharpley and Sharpley (1997). Reasons for this included the growth in short breaks, often taken in rural areas, a greater overall interest in the 'heritage industry', an increased awareness of the health benefits to be accrued from an 'outdoors' lifestyle, improvements in outdoor equipment and increased promotion of rural tourism (Sharpley and Sharpley, 1997).

The increase in outbound tourism was also related to technological, social and cultural change as many British residents viewed their holiday abroad as an entitlement, rather than a privilege, and a means of escaping routine and the British weather. Meanwhile, the development in internet technology and inexpensive flights had served to make foreign holidays (and business trips) easier to arrange and afford. Consequently, in 1999, British residents embarked upon fifty four million trips abroad, with sixty-four percent of these trips being for the purpose of a holiday (Bardgett, 2000).

Technological, social and cultural change had not been limited to Britain and there was an increase in inbound tourism, evident as 25.7 million foreign visitors arrived in the UK for business or pleasure purposes in 1998 (Bardgett, 2000).

5.2: The national organisation for British tourism in the year 2001

The 1969 Development of Tourism Act created the British Tourism Authority (BTA) which had a duty to promote Britain overseas, and the Scottish, Welsh and English Tourist Boards whose obligation was to promote their nation to the overall British domestic market. In 1999, the English Tourist Board was replaced with the English Tourism Council (ETC), the role of which was to advise the Government, conduct research, improve quality standards and promote tourism throughout England, although it did not have any marketing responsibility (CMSC, 2003). Marketing for England was split between the BTA, the Regional Development Agencies (RDAs), local authorities, regional tourist boards and tourist information centres (CMSC, 2003). Governmental representation, funding and support for tourism were provided by the Department for Culture, Media and Sport.

5.3: The Foot and Mouth outbreak

On the evening of the 20th February, 2001, the government's Ministry of Agriculture, Fisheries and Food (MAFF) confirmed that there had been an outbreak of FMD in Britain. The initial outbreak of this highly contagious animal disease occurred at a pig farm at Heddon-on-the-Wall in Northumberland (DEFRA, 2002) but, by the time it was confirmed, it had already begun to spread to other parts of the country (Butler and Airey, 2005). In an attempt to control the disease, the British government embarked upon a stringent disease eradication policy which included:

- i. A restriction on livestock movement.
- ii. The closure of countryside footpaths and bridleways, even in areas not affected by FMD (NAO, 2002).
- iii. The culling of infected and suspected infected livestock.
- iv. The disposal of carcasses by incineration rather than by burial.

The disease was being treated by the government as an agricultural issue and little thought, or concern, was given to the potential effects of these measures on the rural tourism industry (Anderson, 2002; Blake *et al.*, 2003; CMSC, 2001; DEFRA, 2001; Lyon and Worton, 2007; Miller and Ritchie, 2003). The reaction was described as 'myopic' (Williams and Ferguson, 2006: 160), and 'kneejerk' (Butler and Airey, 2005: 2002). It was not, however, altogether surprising as British governments had traditionally displayed a somewhat indifferent attitude towards tourism (Middleton and Lickorish, 2007), despite the socioeconomic transformation of the countryside in which tourism had evolved into an economic force eclipsing that of agriculture (Baxter and Bowen, 2004). 'Much has changed since then, with the great growth in rural tourism and leisure, in counterurbanisation, in the urban-rural shift in certain types of employment and in the expansion of farm household pluriactivity. Yet public perceptions and official outlooks have not kept place' (Bennet *et al.*, 2001: 40).

In spite of the historical apathy shown by the government to tourism, commentators believe that a political agenda could in fact have been the motivating factor behind decision-making, in particular the government's unwillingness to postpone the imminent general election (McConnell and Stark, 2002; Miller and Ritchie, 2003; Sharpley and Craven, 2001). Meanwhile, one interview respondent, from Cumbria, firmly believes that the crisis response was influenced by political manoeuvring:

The answer is political and economic – all tied up with agreements made by governments about disease free status. FMR1

Furthermore, several interview respondents suggested that the whole crisis was orchestrated by the government as a means of bringing to an end the subsidies paid to hill farmers.

They wanted to change the method of farming, subsidies things like that, but it got out of hand. But yes, we believe it was actually deliberately started. FMR2

Of course, these are the subjective views of interview respondents but, nonetheless, they serve to emphasise the political complexity surrounding the event. McConnell and Stark (2002), in a paper investigating the political issues surrounding the crisis, believe that the government was, firstly, influenced by its relationship with the National Farmers Union (NFU). Indeed, one respondent stated that:

The NFU is a brilliant organisation, it's so well-organised and it already had its tentacles all over the politicians. FMR3

The long-standing close relationship between the NFU and MAFF and the strength and capability of the NFU was a decisive factor in government decision making. According to Miller and Ritchie (2003: 162, 163) '... the NFU were able to influence government policy in a way that favoured farmers, to the detriment of the tourism industry'. For example, a meeting between the NFU president Ben Gill and the Prime Minister, in which Gill reportedly voiced the frustration felt by farmers regarding the government response, led to an 'angry' Prime Minister visiting Cumbria and promising full support for the agricultural industry. Similarly, pressure from the NFU allegedly contributed towards a change in the culling policy, blocking vaccination proposals and led to substantial compensation packages for affected farmers (McConnell and Stark, 2002).

Secondly, McConnell and Stark (2002: 680) suggest that sensitivity to public opinion was a major influence on the government's choice of policy: 'In terms of FMD, what was at stake was public confidence in the government in the run-up to the general election. In a World of adversary politics, the stakes do not come much higher than this'. Thirdly, they argue that the relevant public bodies were suffering from bureaucracy and fragmentation: The emergency stage of the crisis 'exposed a ministry (MAFF) suffering from an institutional malaise and a fragmented civil service, incapable (at least in the early stages) of providing a 'joined-up' response to match the scale of the crisis' (McConnell and Stark, 2002: 665). This is illustrated by an excerpt of a letter written by a respondent in the early stages of the crisis.

I am outraged at the way we keep being told by the government that everything possible is being done to contain the disease. This is not so, despite what they say, as the last three days have proved... There is documented evidence that the Ministry visited the pig farm at Heddon-on-the-Wall and did not take immediate action- the pictures shown on television prove beyond doubt that any official who visited the establishment must have been blind or completely inadequate to carry out his or her duties.

Source: letter provided by interview respondent FMR1.

Notwithstanding the range of influences which affected government policy and the manner in which it was practised, the fact remains that the policy of restricting countryside access, the culling and incinerating of livestock and the media images which appeared thereafter, collectively provoked a crisis for the tourism industry.

Domestic tourists avoided rural areas and many international tourists shunned the country completely. Domestic tourists ceased to visit rural areas for three principal reasons:

- i. Many tourists visit countryside areas to walk, enjoy the views and to visit attractions; with many parts under restricted access then this was just not possible.
- ii. As a result of widespread MAFF publicity, people were under the impression that they were helping the situation by not visiting these areas.
- iii. The disturbing images presented by the media served as a deterrent to a great many people, who consequently changed their plans. As Coles (2003: 184) explains: '...they decided to go abroad because images of billowing funeral pyres stuck in their minds'.

The media reports particularly affected international tourism, where the loss was felt more so in London than in rural areas.

Tourism numbers had dropped off quite dramatically and almost immediately people cancelled their trip. All around the world people were thinking that it was dangerous, bad for your health, to come to Britain and it would be difficult to get around and, therefore, a bad time to come to Britain. FMR4

The BTA identified several factors which were influencing overseas travellers not to travel to Britain. These included:

- i. The countryside restrictions.
- ii. Fears of returning to their own country having contracted FMD.
- iii. Health and safety concerns.
- iv. Unease concerning the way the crisis was being dealt with (BTA, 2002).

Additionally, Butler and Airey (2005: 221) suggest that the media reports damaged the idyllic impression that many had of Britain: 'The public tourist perception of the UK in part is of a rural idyll and anything which shakes that image has the potential to do great harm to the tourism industry, even if the image is not entirely correct...'.

The tourism industry had initially assumed that the outbreak was merely an agricultural problem:

When the media started talking about the outbreak of foot and mouth I think everybody, including the tourism sector, thought of it as an agricultural issue.

FMR3

The belief that it was not a tourism issue ultimately resulted in a belated response. Meanwhile, sensationalist media reports were not being countered in any way by the industry, thereby serving to intensify the crisis for tourism (Baxter and Bowden, 2004).

I would say that the damage that the media can do is in the first three weeks because after about three weeks they have moved on to the next story and it's not that it drops down the ratings but it's in the first three weeks, so if you haven't got a hold of it in those first three weeks then you are constantly trying to counter the negative messages. I think what we all probably learned from that experience was that... I suppose because we bought the story about it being a farming issue we weren't out there talking to the media from day one and so we were always trying to recover the situation. FMR3

Approximately two weeks after the initial outbreak, the ETC contacted the government to inform them of the impact that it was having on the tourism industry. However, they were initially met with indifference:

...tourism was this kind of slightly irritating, pip-squeak industry in the corner that had the temerity to complain about footpaths being closed when all they were trying to do was cure this critical disease for farming. FMR3

It was only following the formation and subsequent testimony of the Rural Task Force report that the government decided to acknowledge the crisis affecting the tourism industry (Anderson, 2002; DEFRA, 2001). A meeting was hastily arranged by the Prime Minister:

There was a gathering at No.10, where it was typical sort of Tony Blair era, you brought in all those people from the industry...he called it a War Cabinet, and so that triggered the Tourism Cabinet being set up and the two individual organisations, the BTA and ETC, then started to think through what they should do to support the industry. FMR3

Realising that the economic and social impacts befalling the tourism industry could no longer be ignored, the government radically shifted its strategy; policy was now

directed towards re-attracting visitors to the countryside by launching a public information campaign, which included a high profile 'World Travel Leaders' Summit'; increasing accessibility to the countryside by working with the National bodies; providing business support in the form of deferred tax payments, extended loans; and a £50 million Rural Business Recovery Programme to enable Regional Development Agencies to assist small tourism and other businesses in England (Butler and Airey (2005: 224).

The ETC, despite being a new organisation and having limited resources (for example, only one member of staff had marketing qualifications) was given responsibility for the domestic recovery, while the more experienced BTA was to provide the international response. Both organisations had reacted slowly and neither had a suitable crisis management plan, which ultimately affected recovery efforts (Ritchie *et al.*, 2003). Nonetheless, initial funding of £3.8 million for the ETC (of which £1.4 million was passed to the regional tourist boards) and £2.2 million for the BTA meant that the respective recovery campaigns could begin.

The ETC, by means of a new call centre, websites and marketing campaigns, aimed to:

- i. address the misconception that the countryside was closed.
- ii. convince people to take trips and short breaks in the countryside.
- iii. provide factual information regarding public access, attractions and public events.
- iv. include great value 'incentive' offers from the trade. (DCMS, 2001a: 8).

According to Frisby (2002), the BTA had already set up an immediate action group (IAG). Its aims were to:

- i. disseminate accurate information regarding what visitors can and cannot do in the UK.
- ii. initiate programmes to encourage potential tourists to visit Britain as the crisis nears its end.
- iii. commence strategic campaigns in key markets. (BTA, 2001)

The IAG developed a three-stage press (immediate action, medium term activity, recovery) and PR strategy and prepared a bid for government funding. It was estimated that the BTA would require a total amount of £22.5 million for its marketing campaign. After receiving £2.2 million on the 6th April (at the same time as the ETC received £3.8 million), the BTA received a further £12 million in May and then £20 million following the terrorist attacks in the USA.

Meanwhile, the second half of the domestic recovery plan was prepared by the ETC and submitted to the government in support of another funding application of £35.5 million, the amount deemed necessary to carry out the recommendations of the plan. However, to the bemusement of many (see Sharpley and Craven, 2001; CMSC, 2001) the funding was refused, a decision that was difficult to comprehend.

The ETC people weren't upset that the BTA was given extra money but they were bloody pissed off about the fact that we were kind of part way through doing something and then suddenly it was cut off, but it's kind of politics, you know, you just have to recognise that that what was going on and get on with it.

FMR3

The refusal indicated to Sharpley and Craven (2001) that, despite their change in strategy, the government still failed to understand the needs of the tourism industry. That is, by providing extra funding to the BTA but not to the ETC, the government were placing an emphasis on the international market, even though the FMD was predominantly a domestic rural crisis. Furthermore, the government stated that money would now be available to the Regional Tourist Boards through the Rural Business Recovery Fund, a fund that had been orchestrated by the newly formed DEFRA (which had replaced MAFF, and did not include the tourism industry), thus indicating that the agricultural industry still held considerable influence over government decision making, despite the change of strategy regarding tourism. Indeed, the ETC's request for £35.5 million pales into significance when compared to the £898 million allegedly donated to the agricultural industry by DEFRA (Butler and Airey, 2005), which is difficult to justify when comparing the respective contributions to the British economy of the tourism industry and the agricultural industry, as demonstrated in Table 5.1 below.

The business support measures offered by the government are likewise criticised and again appear to favour the agricultural industry. They are described as 'confusing and insubstantial' by Sharpley and Craven (2001: 533), especially compared to the support offered to farmers whose livestock were culled.

The farmers got all the money. Without going into the ins and outs of that, they got compensation, massive; nobody else did, no matter what trade you were in. Farmers got everything. Any financial assistance they were offering you had to pay it back, so it might have just kept you stumbling along but then once you come to the end the fence was that much higher. FMR2

Table 5.1 Agriculture versus tourism

	Agriculture (all)	Tourism
Revenue per annum	£15.3bn (total) £7.3bn (livestock and livestock products)	£64bn
GDP	1%	4%
Foreign exchange	£8.4bn (total) £1.0bn (livestock/dairy)	£12.5bn
Employment	1.5% of workforce	7% of workforce
Tax contribution	£88m	£1.5bn
Growth rate: 1996-1999	-21% in revenue	+26% in revenue

Source: adapted from ETC (2001b), cited in Sharpley and Craven (2001)

Even when it became apparent that action was needed, following the Rural Task Force report, the lack of funding and insubstantial support measures for tourism businesses reflected the government's lack of recognition of the tourism industry, noted in the 'Lessons to be Learned Inquiry' report which concluded that rural and tourism businesses received very little compensation, unlike those farmers whose livestock had been culled who received substantial compensation (Anderson, 2002).

The FMD outbreak developed into a very complex crisis for the tourism industry. The fact that FMD had already spread throughout the country before the initial diagnosis was made meant that it evolved at differing rates in different places, thus hampering marketing responses.

It's a completely moving thing, it's incredibly difficult and just when you thought something was dying down you would then hear there's another outbreak somewhere else. FMR4

Furthermore, the conflicting messages emanating from government, tourism organisations, local authorities and the agricultural industry served to confuse rather than illuminate potential tourists. For example, Ritchie *et al.* (2003) note how in one region the district council and the county council were offering contradictory advice regarding countryside accessibility; meanwhile, the actions of other parties were at variance with the messages emanating from the BTA, thus damaging their efforts.

It's calming down a bit and we can breathe, or whatever, and Tony Blair goes on walkabout in a kind of biological warfare space suit; I mean that picture went global and it told the world that it was obviously incredibly dangerous to walk outside in the UK... FMR4

The epidemic was eventually brought under control with the last reported case occurring on the 30th of September, 2001, by which time the terrorist attacks in the USA had provoked another tourism crisis for the industry. The FMD outbreak came at a huge cost to the tourism industry with losses of between £2.7 and £3.2 billion due to postponed or cancelled trips, while losses to the agricultural industry were estimated to be £600 million (Franks *et al.*, 2003). The visitor figures for 2000/2001 can be seen in Table 5.2 below, although it should be borne in mind that the terrorist attacks in the US also influence these figures.

The Foot and Mouth crisis closed the countryside and was a headline issue for UK residents. Those parts of the country, which were almost totally reliant on the domestic market, were very badly affected. Later in the year, the events of 11th September had a major impact on international travel. This was much more serious for London and the South East of England. FMR3

Table 5.2: The drop in visitors from the long haul markets

Year	2000	2001	
Originating market	Visitors (million)	Visitors (million)	% change
North America	4.87	4.24	-13
Western Europe	15.38	14.17	-8
Rest of World	4.96	4.52	-9
Total visitors	25.21	22.93	-9
	GBP billion	GBP billion	
Total spend	12.81	10.82	-15

Source: BTA (2002)

5.3.1: Summary

What began as a farming crisis rapidly turned into a tourism crisis, primarily as a result of the actions of the government and the reaction of the media. The situation was particularly exacerbated by the fragile nature of a British tourism industry lacking in structure and guidance and the complex nature of a crisis which was treading a long unpredictable path in a geographically large area. Over-shadowed by a more powerful agricultural industry, the tourism authorities struggled to make themselves heard, and it was only following the recommendations of the Rural Task Force that the government modified its policy and began to assist the tourism industry. Even so, the government was criticised for not providing sufficient funding to the ETC and adequate assistance to tourism businesses.

5.4: Limitations of contemporary tourism crisis and disaster management models and frameworks

In Chapter 2, contemporary tourism crisis and disaster models and frameworks were criticised and several issues were presented which, it is suggested, limit their effectiveness. The following section considers these issues again amidst the backdrop of the FMD crisis. It is noted that all of the limitations were present during the crisis: stakeholders are found to have held different perspectives of the crisis; the government reaction and the nature of the crisis is found to have been unpredictable; the path of the crisis did not equate with the crisis lifecycle; the size and scope of the crisis and its contextual elements was not appropriate for a general, one-size-fits-all crisis management plan; and the lack of coordination within the tourism industry and between the industry and the government and agricultural industry is found to be a factor which would limit the application of contemporary tourism crisis management plans.

5.4.1: Organisational crisis and disaster management theory

Difficulty of implementing a collective strategy due to different perspectives:

Organisational crisis and disaster management literature was used by Faulkner (2001) and Ritchie (2004) to develop their frameworks, but this leads to several causes of concern. Firstly, parallels appear to have been drawn between the concept of a solitary business organisation and that of a tourism destination, as if referral to one inevitably relates to the other. This appears to neglect the fact that there are variances between the two entities, thus altering the context of the discussion. To start, a business organisation is usually classified as being a unique enterprise consisting of a number of stakeholders whose actions are co-ordinated towards achieving a collective goal; a destination, meanwhile, consists of a multitude of enterprises each with their own specific goals. Although mutually dependent on the interconnectedness of the system

and the success of the destination, these actors are often in direct competition. Consequently, when a crisis or disaster occurs in a business organisation, managers can generally assume that attempts to encourage forms of co-operation and collaboration will be recognised and adopted by all stakeholders. However, it cannot be similarly assumed that all the actors which exist within a tourism destination will readily embrace calls for mutual support during a crisis as it may not be in their interest to do so

This was evident during the FMD crisis, as tourism businesses within the same sector and sharing the same location were often affected differently. Some individual businesses saw an increase in business during the FMD crisis, and were consequently less enthusiastic about achieving rapid recovery than other businesses who were suffering severe financial impacts.

We had a very busy foot and mouth period. The authorities booked all our rooms, en-block, and sent a succession of herdsmen and vets assistants to stay with us. The rooms were paid for even if they were unused. Please can we have another epidemic? FMR5

While it was in the interest of this respondent that his region did eventually make a full recovery, it was initially advantageous to him in a financial sense that the recovery was relatively protracted. On the contrary, other tourism businesses in the vicinity suffering negative impacts were in need of a rapid recovery. Therefore, the problem lies in how to manage this array of conflicting stakeholders, who are in many respects inter-connected and mutually dependent but also have varying interests depending on the situation.

5.4.2: The unpredictability of crises and disasters

Many academics recommend pre-crisis planning as a critical ingredient of tourism crisis and disaster management; however, the unpredictable nature of crises and disasters can take a destination by surprise, and this can be amplified when bewildered managers discover that the various scenarios discussed and contingency plans developed often bear no relation to the crisis at hand.

There had been an outbreak of FMD in the UK in 1967 and, given the highly contagious nature of FMD and the interconnected infrastructure of modern farming, it was likely that it could happen again.

The official view was that it would reoccur at some point in the UK. FMR6

MAFF considered the prospect very likely and had consequently formed contingency plans which met with European Union requirements (NAO, 2002). Indeed, Yeoman *et al.* (2005), in hindsight, firmly believe in the possibility of *another* outbreak and have consequently prepared a specific crisis response strategy for VisitScotland.

Crucially, it was not the occurrence of FMD that was the unpredictable feature of the 2001 crisis; rather, it was the detrimental impact that it had on the tourism industry. That is, FMD had always been considered an agricultural matter. Therefore, a potential outbreak was not considered by the tourism authorities as a specific threat to the industry.

At the time, I think like everybody, when the media started talking about the outbreak of foot and mouth, I think everybody, including the tourism sector, thought of it as an agricultural issue ...the expectation was that it might be a couple of weeks to isolate the problem ... let the scientists take care of it. FMR3

There was an air of relative calm because, as Miller and Ritchie (2003) point out, the tourism infrastructure was not under threat, FMD is not contagious to humans and there was no visual impact on the landscape. In hindsight, it could be argued that the tourism authorities should have identified the potential of a tourism crisis immediately. Certainly, Ritchie *et al.* (2003) criticise the fact that the industry did not react to the outbreak until the emergency phase, when there was a fairly lengthy prodromal phase in which they could have responded earlier and more effectively. However, the fact remains that FMD had never been considered as a threat by the tourism industry and, even when the first few cases appeared, the seriousness of the matter was not recognised. For the tourism industry it was not a predictable crisis. As a result, the impact that the FMD outbreak came to have on the industry came as a complete surprise to those concerned.

The government response to the outbreak could also be considered unpredictable. In spite of the historical apathy for the tourism industry, the extent to which the government disregarded the potential impacts of their eradication policy on tourism could not have been predicted. For example, the Northumberland Report, published following the 1967 outbreak, had recommended the burial of carcasses as opposed to incineration, and so it could have been reasonably predicted that the government

would follow this advice. Instead, however, it was decided to burn the carcasses, which damaged the 'appeal and image' of the destination (Miller and Ritchie, 2003: 161).

This leads on to a final point which involves the unpredictable *nature* of the crisis. That is to say, not only is the arrival of a crisis or disaster in itself unpredictable, but also open to irregularity is the course, or path of the crisis, which complicates the response. This was evident during the FMD crisis 'as the prodromal, emergency and recovery stages were all happening simultaneously for large periods of time, not just for different locations but for different industrial sectors of the same location and, in some cases, within the same organisation' (Miller and Ritchie, 2003: 168). This was noted by an interview respondent:

Just when you thought something was dying down you would then hear there's another outbreak somewhere else. FMR4

Rather than a natural disaster which has a predictable path, a crisis resulting from an epidemic can be random and indiscriminate, which adds to the complexity of the response and limits traditional crisis management plans, as will be demonstrated in the following section.

Therefore, an outbreak of FMD was predictable given the nature of the disease and its historical link with the UK. What the government had failed to predict was the potential seriousness and complexity of an outbreak of FMD and this resulted in a harsh, misinformed reaction which did not take into account the resultant impacts on the tourism industry. The tourism authorities in turn had always considered FMD to be an agricultural matter and so did not consider it their 'problem'; therefore, it was 'unpredictable' for them. While FMD was an agricultural concern, the government reaction directly contributed to the crisis for the tourism industry and this is a major factor which the tourism industry had never considered.

5.4.3: The limitations of prescriptive models

Contemporary tourism crisis and disaster management models and frameworks tend to presume that a crisis or disaster passes through several, sequential phases to form what is called a crisis lifecycle. While this is a convenient format from which to conceptualise a crisis or disaster it is unrealistic as many crises fail to adhere to the lifecycle's chronological format. For example, crises frequently by-pass the prodromal phase and arrive without warning as a full-blown emergency and sometimes they may provoke other crises so that more than one crisis is happening at the same time. Also,

being naturally chaotic and complex, they are continually evolving which complicates the managerial response.

The FMD crisis did not pass through what is known as the pre-event phase in which action can be taken to mitigate the effects of potential crises, as there was little evidence of crisis management planning in the tourism industry before the outbreak.

There was no formal structure anywhere in tourism. There was no tourism crisis planning in 2001. FMR3

Even though there was still arguably time for the ETC and the BTA to prepare a response within the prodromal phase, it appears that neither organisation did, although the BTA insists that it reacted quickly by setting up the IAG within a week of the first case appearing (Frisby, 2002):

...the BTA as an organisation reacted to the crisis quickly and very professionally. FMR4

Nevertheless, Ritchie *et al.* (2003: 209) criticise what they deem to have been the slow response of the BTA and local level agencies: 'Because of a combination of a delay in identifying foot and mouth, a disbelief of the severity of such a crisis and a lack of proactive planning, there was a delay in reacting to the crisis by the tourism industry at both a national and local level. Both the BTA and industry at the national and local level only accepted the implications of the outbreak at the emergency stage and reacted only due to negative publicity'.

Also, as discussed above, because of the nature of the crisis and the severity of this particular outbreak, different regions appeared to be either totally unaffected, lingering in the prodromal state, suffering an emergency, or even entering the recovery stage at the same time (Miller and Ritchie, 2003), thus making it difficult to identify stages of the crisis (Ritchie (2009). Consequently, a national DMO, such as the BTA or the ETC would have had great difficulty in following and administering the step-by-step approach of contemporary models and frameworks. For example, honeypot areas of the Lake District, such as Windermere and Grasmere, did not suffer as badly as more rural areas:

As things moved on there were people still coming because we get people coming to Windermere who never go walking. They only go on the boats, they have a wander round, go for a cup of coffee, go for a pint; so there were still a few people coming and Windermere and Bowness in that sense didn't do quite as badly as some of the more rural areas. FMR7

I don't know any businesses that hadn't pulled it back by September. That's in the southern lakes; the northern lakes had it harder. The Keswick area had it harder. FMR8

The limitations of prescriptive models draw attention to another weakness of Faulkner's (2001) model, which will be considered in the following section. Just as step-by-step directions become impractical during a complex crisis which does not follow the crisis lifecycle, frameworks which are developed to fit all manner of crises and disasters are likewise unfeasible. In reality, each crisis and disaster is different, thus requiring an exclusive and unique response according to its particular characteristics. Therefore, an 'all-encompassing' framework, such as is offered by Faulkner (2001), cannot apply to every situation.

5.4.4: One size fits all approach

All crises and disasters differ in their origin, nature, location and impacts. It is argued that to assume Faulkner and Ritchie's frameworks can function as a 'one-size-fits all' tool to guide management through the myriad of potential situations that may occur is unrealistic. Anderson *et al.* (2005: 4) state that 'recognising the properties of complex adaptive systems, it becomes apparent why improvements in the health care industry have been difficult to achieve using regulatory or one-size-fits-all strategies'. The same concept applies to tourism crisis management plans. That is, tourism crises and disasters cannot be generalised, they are wholly distinctive and the 'contagion effects' (Carlsen and Hughes, 2007: 147) depend entirely on the nature of the crisis and the response to it. In such a way, the FMD crisis exhibited several characteristics which would have limited the usefulness of Faulkner and Ritchie's frameworks as a crisis management tool.

5.4.4.1: Size and scope of tourism crises and disasters

The tourism authorities had to contend with a crisis which covered a wide geographical stretching from Scotland to the South of England. Some individual regions, such as Cumbria and Devon, suffered particularly damaging impacts, while other areas were barely affected and may even have benefitted from displaced trade. London,

meanwhile, suffered from a significant drop in international tourists, despite not experiencing one case of FMD. This was symptomatic of the intricate nature of the crisis:

The complexity came about because of the variable impact around the country.

FMR3

As has been noted, even individual businesses within affected areas were impacted differently. For example, one respondent commented on how his business profited from the crisis but others were not so fortunate:

We had a very busy foot and mouth period ...We were unusual. Parts of the Lakes were desolate and some hostleries didn't trade properly for months.

FMR5

Another respondent further reiterates:

I think it's difficult to generalise because certain aspects of the industry bounced back relatively quickly; they all of a sudden had hotels full of DEFRA officials or army officials, all sorts of people trying to resolve the problem, so basically they were booked up for weeks on end making seriously good money so certain sectors or certain places seemed to get a benefit instantly, perversely, and others perhaps further afield, such as a farm based tourism attraction, were absolutely left high and dry, so it gets more complex because you are arguing about more specific things and specific areas and specific sectors. FMR6

The nature of the epidemic also provided the added complication of regular new cases which would exacerbate the difficulties of responding to a crisis which had no definitive end.

...every day there seemed to be something different... There was a time when we thought, you know, are we ever going to get on top of this? FMR4

As noted by Miller and Ritchie (2003), a crisis such as the Katherine Flood cannot be likened with the FMD crisis. Although Faulkner's (2001) framework was found to be effective when applied to the Katherine incident, it did not meet with the same success when employed on the FMD crisis. The Katherine Flood occurred in one location and was quickly over while the FMD crisis was much more geographically and temporally

diverse, placing considerably more demand on the tourism authorities at a national and local level.

5.4.4.2: The contextual elements of a crisis or disaster

It is argued that a one-size-fits-all approach does not recognise the unique context within which each crisis or disaster unfolds. National culture, destination culture, destination structure and political structure all serve to place each crisis into a unique context. In the case of the FMD crisis, in a broad sense it could be said that the national culture contributed to the lack of preparedness; more specifically, the culture surrounding the British tourism industry, the structural organisation of the industry and the industry's relationship with the government were all factors which contributed towards the tourism crisis and also affected the response.

Contextual elements- National Culture

Firstly, it has been said that the cultural traits of a nation's inhabitants could have an indirect effect on tourism crisis management (Speakman and Sharpley, 2012). Of relevance in the case of the FMD crisis is Hofstede's (1983) cultural dimension of uncertainty avoidance. According to Hofstede (1983) UK inhabitants exhibit low uncertainty avoidance, meaning that British people, in general, are supposedly content to 'make it up as they go along.' Adding credence to Hofstede's (1983) conclusion is the fact that there was little to no crisis planning within the tourism industry prior to the FMD outbreak.

When I say there was no crisis plan I mean it, it was dark ages, you know, when I think about it now it really was dark ages. FMR3

If correct, and a shortage of interest in crisis planning is a consequence of a cultural trait, then it demonstrates that the adoption of tourism crisis and disaster models would be problematic in numerous cultures, including the UK.

Contextual elements- Destination culture

It is also necessary to consider the culture of the destination's tourism industry. While extensive research has been conducted into organisational culture (see Brown, 1998; Cadden *et al.*, 2013; Santana, 1999), research concerning destination culture is sparse, despite Faulkner (2001: 139) insisting that 'different internal cultures and modus operandi become barriers to communication and co-operation between organisations'.

The inherent culture of a tourism destination (general attitudes, beliefs, shared philosophy) is one of the principal factors contributing towards its success. A learning tourism destination, which functions like a complex adaptive system on the edge of chaos, promotes these principles and ultimately develops a 'crisis culture'.

Unfortunately, the British tourism industry in 2001 cannot be credited with having a crisis culture, as no steps had been taken to establish a learning tourism destination which would have enabled this to happen, probably as a result of chronic government disregard and the structurally fragmented nature of the industry.

...there had always been a little bit of tension and confusion about who is responsible for what. FMR3

Consequently, the industry had never considered a holistic crisis and disaster management strategy. Despite apparent efforts to improve matters with the DCMS Tomorrow's Tourism initiative in 1999, there appeared to be little coordination within the industry which had culminated in the BTA, the ETC, the regional development agencies, the regional tourist boards and the local authorities often working to their own agenda, unsure as to their actual role and with the industry suffering from a lack of national guidance. In short, the industry lacked the structure necessary to develop a crisis culture.

Contextual elements: Destination structure

The problem with the industry's structure was that it lacked an efficient information infrastructure and, as Comfort *et al.* (2010: 59) remark, 'without a well-functioning information infrastructure, communication and coordination fail, and the response system is compromised'. In short, the destination becomes 'a scattered set of organizations that [perform] in an erratic manner under severely compromised operating conditions'. This is what occurred during the FMD crisis and it was a direct result of the government failing to develop a destination structure which was shaped to facilitate collaboration and cooperation among the destination's organisations and enterprises. Instead, the destination was left to function as a collection of distinct public and private organisations with their own particular remits, among a multitude of smaller businesses without the resources to market themselves, let alone plan for crises.

Contextual elements: The British government's relationship with tourism

The historical apathy towards tourism had, therefore, resulted in a destination which was fragmented and lacking an effective 'leader', one that could endorse tourism and stimulate positive change. Middleton and Lickorish (2005: 130), frustrated with this

situation, complain that Britain 'has been and still is one of the relatively few countries in Europe in which the government has tended always to play a 'hands off' role using officially recognised or statutory agencies rather than establishing a government department for the purpose'. Therefore, while many countries had established a specific 'Ministry of Tourism' as an industry 'leader', with a remit to formulate strategy, coordinate tourism agencies and foster positivity, Britain had placed tourism within the Department of Culture, Media and Sport.

Not only had governmental disinterest culminated in the scenario in which the tourism industry was structurally fragmented and lacking a crisis culture, it actually contributed to the FMD tourism crisis, as the government strategy focused upon assisting the agricultural industry and ignored the implications for the tourism industry. In fact, the extent to which the government was prepared to go to pursue its own interests, in this case their determination to hold the elections in May, as planned, is reflected in this story recounted by a respondent:

I think Tony Blair went on television and said that the number of cases had started to drop; he was happy to say that we've passed the point of no return, everything's fine, the election will go ahead as planned. I'm sure it's not the only issue, but that night I went on Newsnight and I said he's wrong, it's not over and my God, did I get into trouble for that. I got hauled before the Secretary of State and effectively bullied into saying that it was over. I think I was speaking the truth- for the tourism industry it wasn't over by a long way- but they were appalled that somebody they thought of as one of them was disagreeing with them and the day after that we found out that our application for funding was turned down. So while I don't know whether there is a direct connection, in my opinion it was punishment. We had had the temerity to disagree with the Prime Minister and therefore both the ETC and the BTA put in applications for the second round of funding and we got nothing and the BTA got- I can't remember how much- but it was several million. I may be putting myself at the centre of something and it wasn't just that but there's no question that they were seriously pissed off from the top down. They were outraged that somebody should try and ruin their chances of holding an election. FMR3

The initial government response to the outbreak did not consider the effect on the tourism sector and even when its policy changed as a result of the Rural Task Force's recommendations, funding for domestic tourism was woefully inadequate and yet millions was given to the agricultural industry by DEFRA. The government defended

itself by insisting that 'domestic marketing is best carried out by the RTB's, local authorities and other destination management organisations, as well as by the industry itself' (DCMS, 2001b), but the memorandum submitted by the North West Tourist Board to the DCMS select committee in 2001 strongly refutes this line of argument:

There is no government funding to the English Tourism Council and, therefore, the regional tourist boards to support marketing. In contrast, both the Wales Tourist Board and Scotland Tourist Board and Northern Ireland Tourist Board receive significant government funding from the respective devolved administrations for marketing and promotion. Funds for marketing are generated by the regional tourist boards themselves, through promotions, including brochures, which are supported by commercial advertising. This limits the scale and scope of tourism promotion: for example, major consumer advertising campaigns and PR campaigns cannot usually be undertaken because funding from tourism businesses is not available for generic campaigns. This deficiency in marketing funding for England has been highlighted by the foot and mouth disease outbreak. (CMSC, 2001b)

The problem inherently lies in the fact that often the government is the major source of support and funding for a tourism industry and thus even the best laid crisis plans are made redundant if this support is not forthcoming. According to Kerr (2003: 28), policies are directly affected by the government of the day : 'How governments use their powers, how they devise and implement policy, will depend upon many factors including their political culture; socio-economic issues; environmental outlook; the political and economic power holders/ brokers; and of course their perceptions of the tourism industry on their economy or society'. This was exemplified when the ETC was refused funding which severely limited their recovery efforts with and, consequently, those of the regional tourist boards (although the RTB's did have access to the regional recovery fund).

The contextual elements of national culture, destination culture, destination structure and political structure (or the government's relationship with tourism) all, therefore, influence tourism crises and disasters and affect the usefulness of crisis and disaster models which supposedly cater for all. The lack of crisis planning in the British tourism industry in 2001 adds credibility to Hofstede's (1983) assertion regarding low uncertainty avoidance; nonetheless, the government's historically distant relationship with tourism and the resultant structural weakness and lack of crisis culture are more convincing arguments for the deficiency in preparation. Certainly, as happened in the

FMD crisis, the flawed relationship between the tourism industry and the government hindered pre-event crisis planning and even when a crisis management plan was formed by the ETC, the poor relationship resulted in funding issues, which severely diminished the potential of the newly formed crisis response strategy.

5.4.5: Lack of Coordination

According to Cavlek (2002: 487), it is essential that there is a high degree of 'coordinated work among the government, national tourism organizations, foreign tour operators, local travel organizers, and local hospitality officials... Each needs to participate to an important degree in order to secure the fulfilment of several important actions. These include successful rebuilding of the destination image, overcoming any adverse publicity resulting from the crisis, short-term restoration and long-term reconstruction of the damaged tourism facilities and infrastructure, an effective management of media coverage'. Faulkner (2001) and Ritchie (2004) concur, stressing the importance of coordination, consultation and commitment between stakeholders to ensure an effective response to crises and disasters. However, they warn that this is complicated due to issues of competition and rivalry. A vital component of contemporary frameworks is the need for understanding and collaboration between stakeholders, but this often appears compromised, thus negating their effectiveness.

In their memorandum for the select committee, the DCMS explained that several inter-agency groups had been established to improve coordination during the FMD crisis. These included:

- Rural Economy Task Force—set up by the DETR [Department for Environment, Transport and Regions] this body is at the centre of the attempt to co-ordinate the response to Foot and Mouth across Government.
- FMD Tourism Summit—convened by Ministers in DCMS on an ad hoc basis to canvass opinion from the highest levels of the industry, the first Summit fed into the Rural Task Force's first announcement, and the second played a key role in developing the National Tourist Recovery Strategy.
- ETC Tourism Cabinet—a weekly meeting of representatives from Government and industry that monitors the situation on the ground.
- BTA British Tourism Development Committee—equivalent to the Tourism Cabinet, co-ordinating overseas strategy.

- Cross-Government Tourism Information Group—plans promotional activity, and links into the National Communications Centre. Composed of representatives from, for example, DCMS, FCO, BTA, ETC and English Heritage.
- Regional Meetings—Regional Tourist Boards have set up their own forums to provide a local focus. (CMSC, 2001b).

Despite the establishment of these groups, coordination problems were a major issue during the FMD tourism crisis:

Coordination problems, other agencies, [laughs] ...the issues were time really, no matter how much you communicated it was never enough. It was also at every level; the individual businesses were critical of the regional tourist boards, the regional tourist boards were critical of the ETC and BTA, the government departments felt that the BTA and ETC were not going quickly enough, the farmers felt that MAFF was too slow, the businesses felt the grants were too slow... Even now I'm not sure you could have done anymore really, the only thing you could do now what you couldn't do then is make better use of the internet and the tools that are available, but yes, there were criticisms about coordination problems and between the ETC and the BTA. Down the line, not immediately, but down the line we had slightly different priorities because we hadn't got any more money and because MAFF had decided to spend some time on a marketing campaign we tended to shift our focus to that and the BTA wanted to focus on the fact that 2002 was the Queen's jubilee and use that as the hook for the recovery marketing and we were kind of ,well ,that's great, but it's next year so it's not soon enough, so it was more slightly different views about what was the right thing to do. FMR3

It is possible to select the following factors for particular analysis:

Coordination between tourism and agriculture:

Lyon and Worton (2007) note how the tourism industry struggled to speak with a cohesive voice during the FMD crisis. In contrast, the ability of the NFU to influence the government meant that policy decisions favoured the agricultural industry. This was noted by Miller and Ritchie (2003), as the original intention to proceed with the Cheltenham Festival was overturned as a result of pressure by the local farming community. Despite socio-economic change in rural areas which had led to tourism becoming economically stronger than agriculture, and suggestions that 'tourism policy

and rural policy should be synonymous' (Sharpley and Craven, 2001: 9 536), MAFF was given the initial responsibility to respond to the outbreak, a department which held traditional ties with the agricultural industry and had few connections to the tourism industry.

Coordination between the government and the tourism industry:

The National Audit Office's (2002) report into the FMD crisis states that 'Tackling a serious outbreak of animal disease requires effective co-operation among a number of government departments, including those responsible for the environment, public health, transport, the armed services, the countryside and tourism. Any strategy for dealing with the disease and its wider impacts also depends for its success on the active co-operation of those closely affected' (NAO, 2002: 4). MAFF had not coordinated and consulted the tourism industry when constructing their contingency plan for a FMD outbreak (NAO, 2002) and this was possibly reflected in poor levels of communication between the government and tourism organisations throughout the crisis which resulted in conflicting messages being conveyed to the public. Indeed, one respondent believes that the issue of coordination was the crisis:

MAFF not knowing what the, well, the County Council not knowing what the tourism industry needs were and DEFRA acting in a totalitarian way, no consultation; there were a lot of agencies around the table to try and coordinate what the different aspects were and certainly that became apparent quite quickly that a high level decision making group needed to be established to get things moving again and there was distress and misinterpretation, frustration and angry words spoken because of the different standpoints of the different organisations. We were falling out with the County Council because they had acted on this mandate to say that you close every footpath in the county when there was no reason to- the outbreak could be 30 miles away, so what was the issue? So the logic had been extended too far. Eventually things were negotiated and positions understood...So yes, frustrating time, co-ordination big, big deal. Coordination was the massive crisis. FMR6

According to Miller and Ritchie (2003: 168), the crisis was 'influenced largely by the power position of the tourism industry vis-à-vis the farming industry and meant that the prodromal, emergency and recovery stages were concerned with responding to the disaster that became the farming industry's suggestions of how to react to the FMD crisis, which in turn led to a tourism disaster'. The well-organised NFU and its relationship with MAFF led to the agricultural industry being the focus of the

government response (despite being economically unviable) and the tourism industry being frozen out of initial decision making, which was what ultimately provoked the crisis for tourism, as was noted in the Fourth Report of 2002: 'When compared with the farming industry, which had one voice in the NFU...and was able to get its views across to government, the tourist industry lacked effective representation'. (CMSC, 2002: 12) If the industry had been configured differently and been able to speak with a unified, powerful voice then perhaps the government response to the outbreak would have been quite different, with more consideration given to the tourism sector.

Coordination within the tourism industry:

Ritchie *et al.* (2003) criticise the initial lack of coordination between local and regional level agencies, while one respondent referred to competition between the ETC and the BTA and the individual regions as a factor which impeded coordination:

There are egos involved and this slightly new upstart organisation [the ETC] was getting a lot of air time and it started to be a bit of an issue with the BTA who were kind of, they had a long track record, very good reputation with the media, and there was a slight kind of 'what do you mean you're doing all these interviews- that's our job', just a slight bit of that and so you started to get almost a slight sense of competition, even between the regions and nationally there were criticisms about you're being too negative with the media saying it's a terrible situation and that is feeding a feeling that people should stay away. So all this is swirling around...FMR3

Another respondent also admits that there were communication issues during the crisis:

We did struggle to speak with one voice during foot and mouth there is no question about that and I think we all learned from that experience and the creation of TIER and the other thing that happened was that the tourism alliance came into being as a direct result... so yes it was a fair criticism. So yes, but I think the message was that the industry needs to get better at putting its message across. The only thing I would say as a counter, if the criticism is driven by the need for simple messages then how can you speak with one voice about a very complex industry? FMR4

The inability to speak with a unified voice and the lack of coordination and competition were weaknesses which had been present before the crisis began; the FMD crisis

simply served to expose these weaknesses and make apparent the need for cultural change within the industry. The different balancing of interests within the various groups affected by and responding to the crisis unsurprisingly led to significant difficulties relating to coordination and cooperation. Each group had its own agenda and understandably sought to further its own cause. While Faulkner (2001) and particularly Ritchie (2004) are aware of this, the frameworks which they offer to do not sufficiently address this complex problem.

To summarise, then, it was clear that all of the issues discussed in Chapter 2 were present in the FMD crisis and would have limited the application of a crisis and disaster management models, such as those of Faulkner (2001) and Ritchie (2004). Firstly, the fact that these models draw on theories from organisational crisis management overlooks differences between business organisations and tourism destinations, such as conflicting stakeholder perspectives, and this was evident as some businesses profited while others struggled. Secondly, the models recommend risk analysis and scenario analysis but it is unlikely that the situation which occurred (as a result of the government's actions and the unprecedented spread of FMD) would have been foreseen. Thirdly, the models are constructed around the framework of the crisis lifecycle and sequential steps to take as the crisis passes through each phase; unfortunately, the FMD tourism crisis by-passed the pre-event and prodromal stages, and also progressed at differing speeds so that while one location was in the intermediate stage another was just entering the emergency stage. Fourthly, the models are essentially one-size-fits-all, supposedly useful for all types of crises in any location, but the FMD crisis was unique in size and scope, dispersed across a large geographical area with variable impacts and without a predictable conclusion.

Meanwhile, the contextual elements of national culture, destination culture and structure and the government's relationship with tourism combined to make the crisis unique to the British tourism industry of March, 2001. If the FMD crisis had, by chance, followed the tourism crisis provoked by the 11th of September terrorist attacks, then the contextual elements might have changed. Finally, the models rely on coordination as a prerequisite to crisis planning but this was severely affected by coordination issues between the tourism industry, the agricultural industry, the government and within the industry itself.

The underlying message which emerges from the presence of these limitations is that a different approach is needed. Several tourism scholars (Baggio, 2008; Farrell and Twining-Ward, 2003; Faulkner and Russell, 1997; McKercher, 1999; Ritchie, 2004)

believe that chaos and complexity theory offers an appropriate theoretical basis for the study of tourism but only Paraskevas (2006) and Speakman and Sharpley (2012: 10) have specifically explored chaos theory in reference to tourism crises, the latter coming to the conclusion that recognising the tourism system as potentially chaotic 'presents destination managers with a more valid framework for anticipating and responding appropriately to crises'. This will be investigated in the following section in the context of the FMD tourism crisis.

5.5: Elements of complexity theory in the Foot and Mouth crisis

The following section examines the events surrounding the FMD crisis for evidence of the elements of complexity theory. It notes that all of the elements discussed in Chapter 3 were present during the FMD crisis: The British tourism industry was not situated on the 'edge of chaos', due to its fragmented nature and the lack of effective leadership; bifurcation occurred as a result of the government actions; episodes of cosmology were evident; strange attractors were apparent; and there was evidence of self-organisation and emergence, although these processes would have been much improved had the British tourism industry been operating as a complex adaptive system on the edge of chaos.

5.5.1: Edge of Chaos

A number of organisational theorists argue that at a point in between chaos and stability, complex adaptive systems inherently become more innovative, flexible and adaptive (McMillan and Carlisle, 2007; Stacey, 2007), features which increase an organisation's general performance and resilience to crisis or disaster. This 'state' is labelled 'the edge of chaos', and the organisational management literature recommends that managers should attempt to position their organisations within this zone for optimal results. McKercher (1999) suggests that a tourism destination could also benefit from being on the edge of chaos, as it would help to avoid stagnation and improve resilience. Following this viewpoint, it was suggested in Chapter 3 that a DMO (as long as it is recognised throughout the industry) be selected as the body to facilitate this process. It involves viewing the destination as a complex adaptive system and facilitating methods which encourage self-organisation and emergence. This is done by transforming the destination into a tourism learning region, in which tourism stakeholders form numerous networks and partnerships with the aim being to increase learning and spread knowledge throughout the system. This will increase natural resistance to unforeseen negative events and encourage the development of crisis planning by storing shared knowledge ready to be disseminated in times of crisis.

The British tourism industry of 2001 did not exist within the edge of chaos zone associated with the organisational management literature and posited in Chapter 3. That is, the creativeness, inspiration and robustness associated with the edge of chaos were not in evidence leading up to the FMD outbreak; instead, worrying signs of industry stagnation and structural fragility point towards the industry being situated in a delicate state, not at all prepared for the oncoming crisis. For instance, there had been a reduction of international visitor numbers and there was a decline in domestic tourism. Furthermore, the levels of competency of the principal bodies approved to govern and direct British tourism was questionable.

To begin with, tourism was represented by the Department of Culture, Media and Sport but, owing to the Department's inferior size and general standing it was 'seen as the more junior partner' (Butler and Airey, 2005: 233, 234) when compared to MAFF. Other bodies set up to administer the industry also appeared unprepared to cope with unpredictable change. Specific mention must be made of the ETC, which was a new organisation whose remit was to provide intelligence and create partnerships. While equipped to pursue such aims, it did not have resources to suddenly cope with an event on the scale of the FMD outbreak.

...the old English tourist board had largely been decimated, a lot of people had been made redundant, and the new English Tourism Council only came into being in April, 2000, no, a few months before that, and because it had a different remit, some staff moved across from the old tourist board, but quite a lot of staff had been recruited. I joined in April, 2000, and inherited an organisation that was still finding its feet and didn't quite know what it was meant to be doing... so, by the time the Foot and Mouth hit we hadn't even had a four year operation, we'd lost our marketing responsibility, we didn't have a single member of staff who had any marketing qualifications, other than me.... we were literally making it up as we went along. FMR3

Despite the structural weaknesses of the industry, Britain did have the highest number of cluster projects within Europe, set up and administered by the nine regional development agencies (Novelli *et al.*, 2006). A cluster is a 'geographically bounded concentration of interdependent businesses with active channels for business transactions, dialogue, and communications, and that collectively shares common opportunities and threats' (Rosenfeld, 1997: 4). The purpose of a tourism cluster, according to Novelli *et al.* (2005: 1143), is 'to highlight the availability of certain activities in one destination or region and to get SMEs that would normally work in

isolation to co-operate and build a successful tourism product in the locality (i.e. the English countryside with other urban and coastal settings)'. Cluster projects exhibit the same principles that a national tourism learning destination would offer, but on a much smaller scale. However, despite their existence, the industry prior to the FMD outbreak generally appeared to be sluggish and lethargic and a principal destination management organisation had not been established, as proposed in Chapter 2, which could have envisaged and established a 'learning destination' project. Consequently, the absence of a national DMO and the lack of cohesion surrounding the tourism industry on a local and national scale hindered the formation of the conditions needed to create a national destination which could function in the edge of chaos state. Therefore, when a crisis of the scale of the FMD outbreak emerged, the industry was slow to react and generally provided an unsatisfactory response.

5.5.2: Butterfly effect

Small, inconspicuous changes can trigger a number of reactions which result in significant modifications to the system which may be of a positive or negative nature. Furthermore, even if the same starting conditions are recreated, a different outcome would be evident each time the process was repeated. In considering the butterfly effect in relation the FMD crisis, it is important to determine exactly what the trigger was which led to the tourism crisis. The origin of the *agricultural* crisis is reported to have been at a pig finishing unit at Burnside Farm in Northumberland and caused by inadequately processed waste food infected with FMD (DEFRA, 2002) and Miller and Ritchie (2003) regard this as the triggering event to the tourism crisis. However, it is suggested that, in this instance, the trigger for the actual *tourism* crisis was the government reactive policy of countryside access restriction and the cull/incinerate method of eradication, rather than the arrival of FMD itself. It was the government's policy that directly brought rural tourism to a standstill and prompted an overabundance of sensationalist media commentary and if their reaction had been different, with more of an emphasis on the potential effects on tourism, then the resultant tourism crisis, while perhaps not being avoidable, could at least have been mitigated.

Destinations can employ methods which create resilience to negative butterfly effects while at the same time attempt to cultivate positive butterfly effects. This was not the case in Britain as nothing had been done to increase resilience to an unpredictable event. Therefore, while positive effects were evident at the close of the crisis, such as the formation of the industry crisis response group TIER, this was not a result of previous industry strategy, more so it was a reactive measure which evolved from the

FMD crisis and the following crisis which was brought about by the terrorist attacks in the USA.

5.5.3: Bifurcation and cosmology

Sudden changes in the system's direction, often caused by a negative butterfly effect, are known as bifurcation. It is a critical point in which the system could either breakdown completely, or self-organise around a new order (Baggio, 2008). Often present at this time are episodes of cosmology when confusion and uncertainty lead to panic, resulting in hasty and often ill-thought decision making.

The agricultural industry, the government and MAFF in particular appeared to be in a state of bifurcation following the outbreak and spread of FMD. The Anderson Inquiry describes the situation: 'A sense of panic appeared, communications became erratic and orderly processes started to breakdown. Decision making became haphazard and messy, not least in the way in which the culling policy was to be extended' (Anderson, 2002: 1). MAFF, while given responsibility to deal with the crisis, appeared to be out of their depth. Williams and Ferguson (2005: 163) describe the handling of the crisis as 'confusion and disorder', while one respondent insists that:

There seemed to be no plan of action, just utter confusion. FMR1

The decision to limit countryside access and incinerate carcasses was perhaps due to cosmology.

The government over-reacted and I think there is a thing around crisis where people will over-manage it or try to, you know, and they made some false moves. FMR4

Governmental decisions in turn triggered the bifurcation for the tourism industry which led to further episodes of cosmology specifically related to the tourism industry. Two respondents describe the bifurcation phase of the tourism crisis as being chaotic:

I think it's fair to describe it as chaos. FMR3

It moved around all the time, there was no overall control in the sense that it was quite, it was very chaotic... the challenges were legion, they really were. FMR4

There were incidents of cosmology among the ETC staff members:

... after a while I became aware of some people showing signs of stress and so on and bursting into tears, that kind of thing... FMR3

Another respondent, meanwhile, suggests that cosmology was evident in the Windermere tourism industry during the initial stages:

The atmosphere when you talked to people was everybody was unsure what was going to happen, where the direction was really aimed at and conflicting views as to how... the situation should be treated. To start with there was nobody looking after how the tourism businesses were starting to suffer...FMR7

There was certainly an element of panic throughout the tourism industry, ranging from the ETC and BTA to smaller, individual businesses, as stakeholders found themselves in an unfamiliar and uncertain position which they were often unsure how to cope with.

5.5.4: Self- organisation, emergence and strange attractors

Two outcomes are possible following bifurcation and cosmology; the system may collapse or it may evolve into an improved form. To improve it must adapt to the changing environment through the process of self-organisation. Sellnow *et al.* (2002: 274) point out that: 'self-organising processes...can be expected to arise following bifurcation in the form of new communicative structures and relationships, understandings, and procedures'. The literature stresses that this can be achieved without outside intervention, but, importantly, the conditions must be in place to do so.

It has been suggested that if the destination functions as an evolving complex adaptive system then it naturally facilitates the process of self-organisation. This can be achieved by transforming the destination, in this case Britain, into a tourism learning area or region. As this had not been done in February 2001, it could be argued that the conditions were not in place to encourage forms of self-organisation.

Nonetheless, there were numerous examples of the concept of self-organisation during the FMD crisis. For example:

i. The Wales Tourism Board affected a novel marketing strategy, as explained by one respondent:

I came up with this idea that we would run live ads- we would run for the first time ever live ads from Wales, featuring tourists in Wales... We had 3 satellite film crews going around Wales, filming visitors in Wales that day. We sent pictures by satellite to a studio in London, we edited them together so we had images from the whole of Wales, and we bought advertising in the prime time slot immediately following the ITV news, each night for two weeks, and it had never been done before, it was a world first in terms of filming adds in the day and broadcasting them that evening. It was done for impact – because it was so innovative and different it gave the industry a real confidence boost... FMR9

ii. The Cumbria Tourist Board Commercial Members' Group sought to organise fund raising to improve their response, as is evident in the following letter sent to their members:

Following the Commercial Members meeting in Carlisle on Thursday 1st March your Committee met to discuss the situation caused by the outbreak of Foot and Mouth in Cumbria.

Obviously considerable damage is being done to the Tourism Industry by the outbreak. We agreed that a big marketing campaign will be needed to try to recover the market afterwards. To this end we are asking all members to contribute to a Fighting Fund to enable our Chief Executive, Chris Collier and the Board to be ready to campaign to try and regain our markets. We have 2,000 members, if each contributed £100 we could raise £200,000. We will then go to Government and ask them as partners in promoting tourism to double or treble this amount. This partnership would help to re-launch our industry (an industry which employs 30,000 directly and 22,000 indirectly in Cumbria).

We hope you agree and will help start our campaign by sending a donation to C.T.B fighting Fund 200. We have suggested £100, but please give what you think is appropriate.

Only by being prepared early and combining our efforts can we hope to recover rapidly after the disaster.

Source: Letter provided by interview respondent FMR1

There was also plenty of evidence of common actions such as cutting spending, taking a smaller wage, cancelling investment, reducing staff working hours, and working

longer hours as smaller businesses organised themselves to survive the crisis (see Phillipson *et al*, 2004).

Our direction was once we realised things were going to basically be difficult we just made it as easy as possible for people to book with us, and we just spent as little as possible and apart from that there is not much you can do. FMR7

Many small businesses self-organised individually because they had no help from tourism agencies or government.

During the crisis there was nothing. It was just let's get through this. It was total dazed and confused. They didn't know whether it was going to last two weeks, two months, two years... FMR2

I found them pretty inadequate. All they looked after were Ambleside, Keswick, Grasmere; they weren't bothered about people round this area. FMR10

Business owners socially discussed their plight on a regular basis:

There's a lot of us born, bred and work here and we are all in the same industry, particularly with the hotels and we all socialise together, and obviously we talked about it a lot and we had a chat about how to do things, yes. But that was only friends in the same industry, there was no real government steerage. FMR8

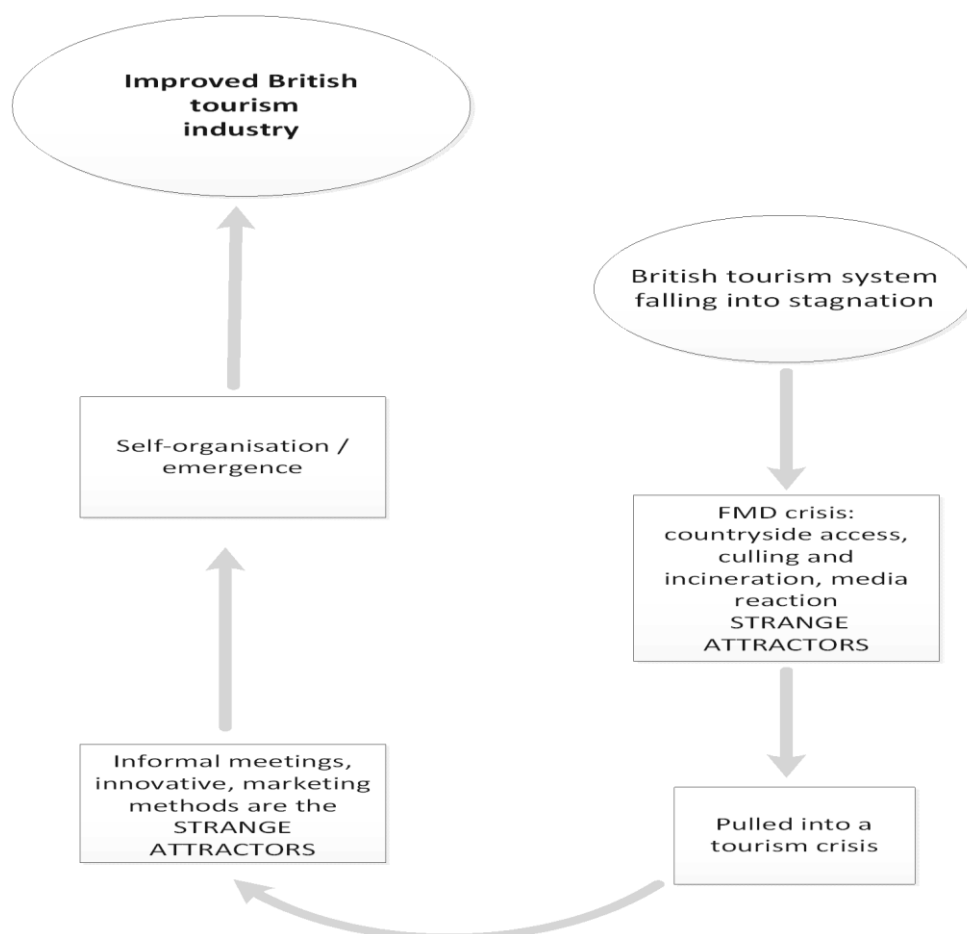
Therefore, many tourism businesses underwent a process of self-organisation on an almost individual basis and there was evidence of small- and medium-sized tourism organisations spontaneously adopting community wide strategies of self-organisation. Furthermore, knowledge and information were often being transmitted on a social basis, which will have assisted the process. This can be linked to the concept of strange attractor as businesses managed themselves towards the common goal of destination recovery. On a broader level, the FMD tourism crisis also acted as a strange attractor in that it served to pull the British tourism industry away from possible stagnation to an improved state of being as is demonstrated in Figure 5.1 below.

Overall, the resilience generated by self-organisation resulted in the majority of individual businesses and the British tourism industry in general emerging from the

crisis in an improved form, which corresponds with the complexity principle of emergence and opportunity arising from crisis.

I think the whole communication structure, the setting up of the TIER group, the lessons we learned about the need to integrate between the national, the regional and the businesses; that was very useful. As an industry we forged some connections with government departments which we hadn't previously had and so I think we got a better hearing. Even though the government machine was critical of the tourism industry at least we started talking to them and things like being recognised as being able to speak for a large number of small businesses, all those things were positives that came out of it. On the ground in the regions I think the good regional tourist boards got a much better relationship with their individual businesses. FMR3

Figure 5.1: Self-organisation in the British tourism industry



It demonstrated that the system (the British tourism industry) was capable of organising and re-emerging without outside interference; nonetheless, it is also suggests that had a specific structure originally been in place to facilitate the self-organisation and emergence process then recovery would have been more rapid and effective.

To summarise, it is evident that the complexity theory principles relating to edge of chaos, butterfly effect, bifurcation, cosmology, self-organisation, strange attractors and emergence were present during the FMD crisis. They can be seen throughout the course of the crisis, as demonstrated in Table 5.3 below:

Table 5.3: FMD crisis incidents and complexity theory elements

FMD crisis incident	Complexity theory element
Unprepared industry	Edge of chaos
Government reaction	Butterfly effect
Tourism crisis	Bifurcation
Panic	Cosmology
Common goal of destination recovery	Strange attractors
Informal meetings, community responses, innovative marketing	Self-organisation
Crisis ends with improvements to the industry	Emergence

As the British tourism industry did not exist in the edge of chaos state, it was not tailored to nullify the negative impacts of bifurcation and cosmology nor take advantage of the positive effects to be incurred from the crisis. While self-organisation and emergence *were* present, demonstrating the somewhat natural resilience of the tourism industry, the process would have been enhanced had the conditions been previously established to nurture its progression. McMillan (2008) provides an Edge of Chaos Assessment model. Despite it being intended for an organisation, it can also be applied to a destination (Table 5.4). It demonstrates characteristics evident when a destination is governed using traditional management controls compared to when using chaos and complexity strategies.

Table 5.4: Edge of chaos assessment model

Traditional management control	Complex adaptive system
Tight, rigid control	Management by self-organizing principles, shared processes.
Change can be organized but does not occur	Constantly changing and adapting as needed.
Inflexible and largely unresponsive structure and frameworks	Flexible, responsive structure with supportive frameworks
Inadequately connected to all parts of the system. Information flow is spasmodic, often of poor quality, often not relevant or difficult to understand.	Well connected to all necessary parts of the system. Flow of relevant, good quality important information that is useful, timely and readily manageable.
Decisions deferred and delayed to serious detriment of system.	Able to make effective, timely decisions using information flow and contacts.

Source: modified from McMillan (2008: 209)

Judging by their initial response to the FMD outbreak the British tourism industry could be accused of floundering in the left hand column, at least in terms of crisis and disaster management. It appears that the response might have been improved had the industry been functioning as a complex adaptive system, as in the right hand column, and this will be investigated further in the following section.

5.6: Restructuring the British tourism system of 2001

The following section will imagine how the British tourism industry might have coped with the FMD outbreak had it been structured as a learning tourism region, following Moles-Moles (2003) and the Schianetz *et al.* (2007), thus naturally incorporating complexity principles into its overall daily operations and in its crisis response.

The establishment of a 'national DMO' which recognises the potential benefits that chaos and complexity theory offers to their long term objectives of local prosperity, visitor satisfaction and sustainability (Buhalis, 2000) would be the essential first step in transforming the British tourism industry into a dynamic, complex adaptive system. Following the discussion in Chapter 3, section 3.4.1.3, it would need to be approved by industry stakeholders and fully supported financially by the government. The role of the DMO would be to restructure the British tourism industry to encapsulate the characteristics of a complex adaptive system and to place the British tourism industry, as a destination, on the edge of chaos, in order to enhance general performance and

increase resilience to crises and disasters. The focus would be on interaction, interdependency, nonlinearity, the unexpected, dynamics, patterns and history (Anderson *et al.*, 2005) and restructuring could be done by adopting the policies advocated in Moles and Mole's (2003) Learning Area Process Model and McMillan's (2002) Fractal Web, discussed previously.

The national DMO would play a major role in transforming each destination into a learning region (or tourism cluster). Furthermore, the DMO would also synchronise inter-destination communication and collaboration so that not only is each destination considered a learning region but the country as a whole functions as though it is one whole learning destination. In essence, the same processes should be replicated (according to the fractal principal), in all the tourism destinations so that the whole of the country's tourism industry appears to be functioning as a complex adaptive system: 'it follows that together they form a co-evolving supra-system that creates and learns its way into the future' (Stacey, 1996: 10).

In the specific context of tourism crisis and disaster management, each destination would have established a number of teams made up of stakeholders – 'heterogeneous teams of diverse people with sufficient mutual respect that they maintain dense interaction with one another' (Weick, 1988: 313) – in accordance with McMillan's (2002) Fractal Web. For example, each destination would have a risk team whose role would be to assess hazards from both the internal and external environment and to determine the extent and implications of any perceived menace. A media team would harness a good relationship with the media, a learning team would initiate activities related to innovative crisis management strategies and an experiences team would reflect on issues learned from past crises and how this knowledge can be used in the future. Crucially, the knowledge gained from these exercises would form a loose plan which could be stored on databases and manuals accessible to all throughout the industry, in accordance with Mistilis and Sheldon (2005) and Racherla and Hu (2009), ready to be disseminated at the first sign of crisis. In view of the limitations associated with prescriptive plans and employing a one size fits all strategy, the loose plan simply details responsibilities, such as listing the members of the crisis project teams, and includes contact details from government departments and emergency organisations. As has been established, detailed, prescriptive planning can be counter-productive, although past crisis experiences will have been considered as an ingredient of the crisis learning activities which have been taking place. Essentially, the conditions will have been harnessed in each destination and the country as a whole to allow 'the

agents to self-organize at local level according to the particular conditions of the crisis' (Paraskevas, 2006: 903).

Local and global knowledge collected from the environment is transmitted throughout the tourism system (for example, the intelligence artery of McMillan's (2002) Fractal Web) by means of formal and informal systems which ensures that all stakeholders are informed about what is happening and are able to find relevant information. This assists the process of rapid communication throughout the industry even when developments are occurring at a fast, unpredictable rate, which would help to reduce incidences of cosmology and confusion as guidance, support and information are readily available at all times. Businesses are encouraged to collaborate in order to find solutions to their particular problems, working autonomously under general principles to self-organise and discover novel resolutions. The principles, which could be, for example, innovation, flexibility, adaptability, knowledge sharing and learning, function as the strange attractors which pull not just individual businesses, but the whole destination towards emergence.

An interview respondent conveyed this notion during an interview:

I think a crisis plan should have principles. It should include pitfalls to watch out for, lessons from experience, but beyond that I think it should be as flexible as possible, rather than prescribed and processed. Principles, clear objectives agreed, and then allow people to get on with it during it. The tough thing is coordination because when something is within your control, and you are a group of managers dealing with that, then it is relatively straightforward. Where things get difficult is when you need to have a multi-agency response and that demands that there is a bit more process around it and a bit more formality around it but I will always say try and limit, yes you need to coordinate and communicate, but beyond that give people the freedom to actually respond.

FMR9

It is, therefore, suggested that if the British tourism industry had been operating as a complex adaptive system/ tourism learning destination in February, 2001, in accordance with the principles outlined in Chapter 3, then the overall response would have been improved. To further illustrate, Tables 5.5 and 5.6 below list the negative issues which surrounded the FMD crisis and suggest how they might have been mitigated if the British tourism industry had been functioning as a complex adaptive system at the time of the outbreak.

Table 5.5: How the impacts from the FMD crisis could have been modified if the British tourism industry had been functioning as a complex adaptive system on the edge of chaos: Limitations of contemporary models

Limitation of contemporary Models	Issue	British tourism industry as a complex adaptive system (CAS) situated on the edge of chaos
The difficulty of implementing a collective strategy- different perspectives	Some businesses affected badly while other make a profit from the situation.	This is normal in a CAS. Individual agents belonging to the British tourism system cooperate and compete spontaneously using the same values and beliefs- the overall aim is the survival of the system.
Unpredictability	Unpredicted government actions resulted in a detrimental impact on the industry.	In a CAS the future is unknowable because of non-linear multiple reactions. Consequently, the British tourism industry considers unpredictable change as normal.
Limitations of prescriptive models	<p>Did not follow the crisis lifecycle:</p> <ul style="list-style-type: none"> ➤ No pre-event stage to the crisis lifecycle led to lack of preparedness and slow response. ➤ Slow response of tourism authorities meant that the crisis arrived in the emergency phase. ➤ Distinct impacts on separate destinations/regions led to managerial confusion. 	<ul style="list-style-type: none"> ➤ The industry is already prepared for crisis; it is functioning as a learning tourism destination which has facilitated the formation of a 'loose' crisis plan detailing responsibilities and examples of best practice. ➤ Information is diffused throughout the destination and responses are quickly formed. The crisis knowledge database allows for rapid formulation of plans. ➤ Conditions have been created to facilitate individual destination self-organisation without DMO interference.

Limitation of contemporary Models	Issue	British tourism industry as a complex adaptive system (CAS) situated on the edge of chaos.
One size fits all	<ul style="list-style-type: none"> ➤ Size and scope of crisis led to management difficulties. <p>Contextual elements:</p> <ul style="list-style-type: none"> ➤ General culture- British tendency to 'muddle-through' had led to a lack of preparedness. ➤ Culture of tourism industry- Historical government disregard and lack of integration amongst the tourism authorities meant that a tourism learning destination had never been established and consequently a 'crisis culture' had never developed. ➤ Structure of the Industry- functions as distinct private and public organisations with own particular remits. No information infrastructure. ➤ Government's relationship with the tourism industry- Historical government disinterest has resulted in a fragmented system, which lacks a voice. Government policy dictates disease eradication methods which do not consider the adverse effects on the tourism industry. Policy is later changed, but funding issues persist. 	<ul style="list-style-type: none"> ➤ Conditions in place throughout the destination to facilitate self-organisation regardless of nature of crisis. ➤ Being situated in the edge of chaos state has led to an air of preparedness and rapid self-organisation. ➤ A tourism learning destination has led to the development of a crisis culture. ➤ The destination operates as an integrated system. This system facilitates information flow. ➤ A unified industry led by a universally recognised DMO has led to increased government recognition for the industry. These same eradication measures are not utilised, thus greatly diminishing the effect of FMD on tourism. Tourism's improved profile results in better funding.
Lack of Coordination	<ul style="list-style-type: none"> ➤ Tourism and agriculture- the industry struggled to be heard next to the more powerful agricultural industry. ➤ Tourism and the government- Poor coordination resulted in conflicting messages being issued to stakeholders and the public. ➤ Within the industry- lack of coordination between local, regional and national level agencies. 	<ul style="list-style-type: none"> ➤ A stronger, unified tourism industry is able to challenge the NFU. ➤ A stronger, integrated industry demands government consultation. ➤ As part of a CAS, stakeholders are coordinating their activities.

Table 5.6: How the impacts from the FMD crisis could have been modified if the British tourism industry had been functioning as a complex adaptive system on the edge of chaos: Elements of complexity theory

Elements of complexity theory	Issue	British tourism industry as a complex adaptive system (CAS) situated on the edge of chaos
Industry is not functioning as a CAS on the edge of chaos	The Industry has never been developed as a tourism learning destination therefore it is unprepared to respond to the FMD tourism crisis.	The British tourism industry is a tourism learning destination, in effect, a CAS on the edge of chaos. It is integrated, flexible, and robust and has established a strong crisis culture. It is prepared for the FMD tourism crisis.
Fail to recognise butterfly effect concept	Industry badly affected by negative butterfly effect (government restrictions) and unprepared to take advantage of positive butterfly effects.	Functioning as a CAS enables the industry to mitigate the negative effect and profit from the positive effects.
Fail to recognise the bifurcation and cosmology concepts	Bifurcation and cosmology episodes in the tourism industry are a result of the bifurcation and cosmology episodes within the government.	The tourism industry is adaptive to change. The values and beliefs now inherent among the destination's businesses function as strange attractors which pull them away from bifurcation and cosmology and towards emergence.
Fail to recognise the self-organisation and emergence concepts	The tourism industry did not have a structure in place to facilitate self-organisation processes. Nonetheless, some marketing strategies (for example, the BTA recovery plan) encouraged the process, Self-organisation was evident in the overall response of the industry, but it could have been much more had the principle been knowingly encouraged.	The industry is specifically structured so as to encourage the self-organisation process and it has developed a culture which draws its 'agents' towards the strange attractors that lead to emergence.

The response of the British tourism industry to the FMD crisis of 2001 would have been improved if the industry had been structured in the form of a complex adaptive system situated on the edge of chaos, in which learning, innovation and competitiveness is a feature emanating from and amongst all organisations, large and small. The purpose and principles of the destination would have encouraged knowledge development and sharing which in turn would have increased innovation and flexibility and ultimately resilience to crises which would have been apparent from the onset of the FMD crisis.

5.7: Summary

The purpose of the chapter was to explore the limitations of contemporary tourism crisis and disaster management models and the presence of complexity theory elements in the context of the 2001 FMD tourism crisis. Following a review of the events surrounding the crisis, the limitations were considered in turn and were found to be evident, thus calling into question the effectiveness of current tourism crisis plans. The elements of complexity theory were also considered. Firstly, it was apparent that they were present throughout the course of the crisis lifecycle, with numerous events being comparable to the butterfly effect, bifurcation, cosmology, strange attractors, self-organisation and emergence. Secondly, it became obvious how awareness and adoption of the tenets associated with complexity theory could improve a destination's crisis preparedness and response; it was, therefore, argued that if the British tourism destination of 2001 had been structured as a complex adaptive system and operating according to its principles, it would have been prepared for the oncoming FMD crisis and able to mitigate its negative impacts much more effectively.

Chapter 6

The H1N1 Influenza tourism crisis in Mexico

'Aha....this was a surprise.' (Interview respondent, MR1)

6.0: Introduction

The purpose of this chapter is to explore, in the context of the H1N1 Influenza tourism crisis in Mexico, the limitations of contemporary tourism crisis and disaster management frameworks and the potential contribution that complexity theory offers to the management of tourism crises. It sets out by examining the history of Mexican tourism in order to provide a broader context to the study. This is then followed by a description of the events which took place, which includes the impacts of the crisis and the reaction of the government and the tourism authorities. Several themes are identified which relate to the over-reaction of the government, the slow response, the extent of government support, media and risk perceptions, travel advisories and risk perceptions, and social media.

The limitations of contemporary tourism crisis management approaches are considered in turn and, once again, all are revealed to exist, although to differing degrees than in the FMD crisis as considered in preceding chapter. For example, differences in stakeholder perception are not as evident; however, there is a general mistrust of authority not present in the UK. Additionally, coordination challenges are not as prominent an issue as in the FMD crisis owing to clearer industry structures, but nonetheless they do exist. The chapter also explores the appearance of the complexity theory elements which, again, affect the Mexican crisis in ways that are different to those previously considered in the FMD crisis. For instance, the trigger for the butterfly effect this time is the origin of the H1N1 Influenza, rather than the actions of the government, although there is evidence of a government over-reaction. Importantly, self-organisation was encouraged and supported by the Mexican authorities although, perhaps inadvertently, rather than with complexity theory in mind. As with the previous case, this chapter concludes by considering how the response to the tourism crisis in Mexico might have been improved had the destination been functioning as a complex adaptive system on the edge of chaos.

6.1: History of Mexican tourism

This section offers a brief history of Mexico tourism in order to provide a contextual background to the H1N1 Influenza crisis. It considers the evolution of Mexico from a place visited by American 'soldier-tourists' to a top ten international destination, highlighting in particular the stage when Mexican government entered the 'race for the tourist dollar' (Berger, 2006: 3), the days when Acapulco attracted Hollywood stars, the subsequent decline of Acapulco, the state led export push, the National Tourism Development plans and the significant, yet controversial success of Cancun.

6.1.2: Mexican tourism 1846-1968

Boardman (2010) believes that the Mexican-American war of 1846-48 is the first example of international tourism within the country's borders and helped to provide the impetus for mass tourist activity which was to occur several decades later. She refers to the American forces as 'soldier-tourists' who, despite being involved in war, found time to explore their surroundings and experience what can only be described as touristic activities 'not so different from those of modern American tourists' (Boardman, 2010: 21). Domestic tourism was also in evidence in the eighteenth century as wealthy citizens of Mexico City often spent time in Cuernavaca, Lake Chapala (Berger, 2006) and Veracruz (Grant-Wood, 2010).

Bueno (2010: 54) describes the opening of the Teotihuacán archaeological site in 1910 for the centennial celebration of independence as 'a specific tourist event', although festivities were cut short as the country erupted into a ten-year political revolution. Later, prohibition served to encourage tourism in the Tijuana-San Diego area as visitors ranging from marines to Hollywood stars crossed the border in search of illicit entertainment (Hiernaux- Nicolas, 1999). Circumstances began to change in 1929 as Mexico's revolutionary government entered 'the race for the tourist dollar' (Berger, 2006: 13), a pursuit which specifically targeted the US tourist. The government opened the first official tourist organisation, the Mixed-Pro-Tourism Commission, a move which brought together government ministries and private businesses with the aim of restoring both economic and political stability following the revolution. The moment is described by Berger (2010: 114) as 'the formal founding of a modern Mexican tourism industry...'. A major problem facing industry expansion was the 'poor impression' (Berger, 2006: 31) that Americans held about Mexico, an issue which still prevails today. The building of the Nuevo Laredo-Mexico City highway 'functioned metaphorically as a bridge between previously fractured nations and created a sense of Panamericanism and 'good neighbourliness, two ideas ingrained in promotional campaigns after 1936' (Berger, 2006: 45). It appeared to be successful as the number

of American motor tourists entering through Nuevo Laredo increased from 14,500 to 29,000 between 1935 and 1937 (Berger, 2006) and it led to the construction of a tourism infrastructure to accommodate the increasing number of American visitors crossing the border.

The Second World War offered an opportunity to promote cultural relations between Mexico and the USA in the form of tourism (Berger, 2010). For example, the 'Presidential Tour' of 1941 'brought together presidents of U.S motor clubs, heads of travel agencies, and, of course, journalists, to the 'real' Mexico beyond its border towns' (Berger, 2010: 120). While it is difficult to assess this 'diplomatic' form of marketing, visitor numbers certainly increased and according to Berger (2010) it helped to 'buffer' some of the mistrust carried by Americans towards Mexico.

The post-war years were defined by the success of the Pacific resort of Acapulco. It had become a popular resort for Mexicans following the construction of the Mexico City-Acapulco highway (Klackle, 2012) and, following state led infrastructure improvements, including the building of an airport, and promotion, it emerged as a 'booming tourist locale' (Klackle, 2012: 7), so much so that 'by the late 1950s, a visit to tourist Acapulco resembled the modern resort experience. Developers built all-inclusive high-rise hotels along the Costera, there were international restaurants and nightclubs, and American Airlines advertised it as a destination' (Sackett, 2010: 178). As part of the jet-set era, Acapulco became popular with Hollywood stars and the Mexican elite; it was considered at the time to be one of the world's most glamorous resorts and was the setting of the Elvis Presley movie *Fun in Acapulco* (1963) and the Frank Sinatra song *Come Fly With Me* (1958) (Kackle, 2012). However, it was not without problems: '...Acapulco was growing chaotically: urban growth was taking place with no control or planning, poverty was rising, and the city and tourist zones lacked necessary infrastructure' (Hiernaux- Nicolas, 1999: 1280. Noting the difficulties occurring in Acapulco and the prevalence of border tourism, which was not particularly profitable, the Department of Tourism began to consider the possibility of creating new tourist zones, the idea being to encourage tourism growth but at the same time not to undermine the existing zones of Acapulco and Mexico City.

6.1.2: 1968- The State role and the export push

While the promotion of tourism had been on the government's agenda since they entered the race for the 'tourist dollar' in 1929, state efforts began in earnest in 1968 when the Bank of Mexico 'released ambitious plans calling for the vast expansion of tourist facilities in the country in order to increase export revenues and create jobs'

(Clancy, 2001: 49). According to Brenner (2005), the political and economic situation at the time called for intervention; cheaper flights made Mexico more accessible to American tourists, the balance of payment deficit was in need of adjusting, international banks were beginning to grant loans for tourism projects, newly discovered oil fields allowed for more public investment and there was no political resistance against government involvement. The project would focus on the creation of five new facilities, known as poles, which would be located at Cancun, Ixtapa, Los Cabos, Loreto and Huatulco, and would cater predominantly for a mass market of foreign, middle-class tourists. Improvements would also be made to Acapulco, Puerto Vallarta and Cozumel (Brenner and Aguilar, 2002). The goal was 'to achieve a controlled increase in tourism by improvement and expansion of existing resorts, and the creation of new tourist zones focused on newly created cities' (Collins, 1979: 353) and the state would take a leading role in planning, providing infrastructure and finance, entrepreneurship and the assumption of risk (Clancy, 2001). The state was effectively the 'primary initiator and overseer of tourism development in Mexico' (Clancy, 2001: 61).

In 1974 a new agency was created, the National Fund for Tourism Development (FONATUR), which would take the lead in tourism planning, promotion and development. The Department of Tourism was also raised to the level of *Secretaría* (cabinet level ministry- now known as SECTUR) which gave it 'greater prestige and fiscal resources' (Clancy, 2001: 56).

6.1.3: National Tourism Development Plans

Since 1977, the Mexican government, through SECTUR and FONATUR, have implemented 'national tourism development plans and federal tourism laws, which state objectives, strategies, stimuli and territorial priorities for the development of the sector' (Brenner and Aguilar, 2002: 510). The plans illustrate the role that the Mexican government has played over the years in its support of the tourism sector. In spite of economic and political change, there has been a 'notable consistency in concept and strategy' (Brenner and Aguilar, 2002: 507). According to Brenner and Aguilar (2002), the prime policy aims relating to the balance of payments, employment creation and regional development have remained unchanged over the years, with secondary objectives to promote domestic tourism being added by new administrations.

6.1.4: Cancun success

Particular emphasis must be paid to the success of the Cancun. More than 27,000 foreign tourists visited the island in 1975 and, for the next nine years, international arrivals grew at an annual rate of 38 percent. In 1984, 70,000 foreigners visited the destination, which was more than one-tenth of all foreign arrivals to Mexico (Clancy, 2001). As Clancy (2001: 137) observes: ‘...by the early 1980’s, the ‘traditional’ Mexican tourist centers were drawing less than a third of international arrivals. For many foreigners, the Mexico they came to know was based on a tourist experience at Cancun or one of the other beach resorts’. Indeed, by 1998 Cothran and Cothran (1998: 479) were describing Cancun as the ‘most popular resort in the Western Hemisphere’.

6.1.5: Summary: the state of Mexican tourism in 2009

It is, therefore, evident that the Mexican government has played a leading role in the development of domestic and international tourism over the last 40 years. According to Clancy (2001), the goals regarding export earnings and regional employment appear to have been met although a number of environmental and social concerns have arisen, such as urban congestion, water pollution and endangered plants and animals. Brenner (2005) also draws attention to the negative social impacts of the international resorts and the failure of the government to address these issues, while Brenner and Aguilar (2002) report on the lack of integrated regional development. Vargas Martinez *et al.* (2013) also add animal migration, litter and water scarcity to the list of concerns.

The overall performance of the industry is also criticised. Ritchie *et al.* (2010: 8) believe that the recent performance between 2005 and 2008 has been somewhat ‘mediocre’ and, although Mexico is within the top ten countries in terms of visitor numbers, worryingly it falls behind in tourism income, as can be seen in Table 6.1 below. Ritchie *et al.* (2010: 11) suggest that the industry has ‘stagnated’ due to the actions of politicians and the lack of professionalism from key players within the industry.

Table 6.1: Top ten international tourist destinations of 2008: arrivals and receipts

Top 10 International Tourist destinations of 2008: arrivals and receipts		
Country	International Tourist arrivals (million) 2008	International Tourism receipts (US\$ billion) 2008
France	79.3	61.6
United States	58.0	110.1
Spain	57.3	61.6
China	53.0	40.8
Italy	42.7	45.7
United Kingdom	30.2	36.0
Ukraine	25.4	5.7
Turkey	25.0	22.0
Germany	24.9	40.0
Mexico	22.6	13.2

Source: UNWTO (2010)

Therefore, while visitor figures appear impressive, tourism revenues are low compared to other countries, with the notable exception of Ukraine. Germany, for example, received 2.3 million more visitors but gained \$26.8 billion in revenue. Another stark

contrast is evident if Mexico is compared to Australia. Australia saw tourist receipts of \$US 24.6 billion in 2008 and yet only 5.5 million visitors entered the country. One interview respondent believes that Mexican tourism is not fulfilling its potential because of the focus on beach resorts and Mexico's political history:

I don't think Mexico is a success in the World tourism arena; on the contrary, I feel that our tourism industry doesn't take advantage of the huge resources and opportunities at hand. I can tell you that our country has great advantages in the field of tourism in resources like land, weather, culture, gastronomy, beaches, location, price, population, history, nature and hotel industry; it has strong, unique historic and cultural characteristics, and yet the official tourism policy goes only for sun and sea attractions, trying to develop mega-resorts in an effort to recreate the successful history of Quintana Roo and Los Cabos. The problem is not located in the tourism industry; the problems in Mexico are structural and have been growing for the last eighty years. It all goes back to the Mexican Revolution from 1910 to 1925 and the kinds of governments that emerged from that struggle that have been based in generalised corruption, improvisation and lack of ethics. There has since been the shameless enrichment of politicians, union leaders and government officials, a monopolistic structure of the economy, massive migration, ignorance and bad education, destruction of the environment, rampant crime and despair. MR2

Various conclusions can be drawn about the state of the Mexican tourism industry immediately before the outbreak of H1N1 Influenza. Cancun had been a major success in terms of the number of visitor arrivals, and the country was situated in the top ten international tourist destinations in terms of arrivals. However, there were negative issues to consider such as the adverse social and environmental impacts of development and the fact that Mexico did not receive a favourable amount of tourism revenue due to its weak currency. Also, according to respondent MR2, while the country boasts many natural resources for diversification, they appear to be ignored in favour of creating the next 'Cancun'.

6.2: Mexican tourism administrative organisation

There are three main bodies responsible for the administration of Mexican tourism. The leading organisation is the Ministry of Tourism (SECTUR) which designs, co-ordinates and implements tourism policy. The Tourism Board (CPTM) is the tourist promotion agency, with offices throughout North America, Europe and Asia. Its activities include public relations, marketing and sales promotion. The National Fund for Tourism

Development (FONATUR) promotes tourism development and participates in the building of infrastructure in such developments. All three organisations work with the individual state tourism departments in the development and promotion of tourism.

6.3: H1N1 Influenza tourism crisis

The following section provides an account of the H1N1 Influenza tourism crisis. It describes the initial government response and the impacts on the tourism industry, the response of the tourism authorities, the crisis response strategy and the recovery. It also identifies the six crisis 'themes' which relate to government over-reaction, slow response, government support, media and risk perception, travel advisories and risk perception and the role of social media.

In early April, 2009, many tourism destinations were suffering as a result of the worldwide economic recession. Mexico, however, appeared to be performing quite well, at least in terms of visitor arrivals. 2008 had seen a 5.9% rise in international visitors from the previous year (UNWTO, 2009) and 2009 had begun in a similar fashion: 'The year started promisingly for Mexican tourism in spite of the effects of the economic downturn on both leisure and business travel (in an economy heavily dependent on exports to, and tourism from, the USA); and of reported escalating cartel drug-related violence' (UNWTO, 2009: 32). The rise in visitor arrivals has been attributed to the exchange rates between the dollar, the euro and the peso, which subsequently made Mexico a more financially attractive proposition for US and European travellers (CEPAL, 2010).

The favourable start to the year was dramatically interrupted on April 13th when the Mexican Health Ministry issued an alert regarding an outbreak of severe respiratory infections which had unfortunately proved fatal in a number of cases. The influenza type illness was originally identified as having a swine component and became known as 'swine flu', until further analysis revealed there was no such swine component and hence it became known as A(H1N1) Influenza (Monterrubio, 2009), or H1N1 Influenza.

6.3.1: Initial government response

On the 23rd of April, the Mexican government, following recommendations from the World Health Organisation, declared a health emergency and schools were closed in three states. The next day it was reported that there were 1004 infected people and that there had been 60 deaths (Monterrubio, 2010). As a result, the Mexican President, Felipe Calderon, following a meeting convened by the Secretary of Health, used emergency powers to implement mitigation measures in Mexico City and the surrounding State of Mexico: 'The objective was to decrease transmission; elements

included an intensive mass media campaign to inform the population about influenza, promote personal and environmental hygiene, request that sick persons stay home, and implement social distancing measures' (Bell *et al*, 2009: 1964). All educational establishments were closed and children were advised to stay at home.

Bell *et al.* (2009: 1965) further describe the measures taken by the authorities: 'In addition to federal measures, on April 27, the mayor of Mexico City suspended dine-in service in all restaurants and similar establishments, allowing only take-out orders. Many restaurants simply remained closed. When affected businesses were allowed to reopen on May 6, social distancing measures (for example, avoiding crowding) were encouraged, and hygiene measures were enforced. Grocery stores and supermarkets remained open, with additional cashiers used to keep lines short. Persons in public places were advised to remain separated by at least 2m. Large gatherings were cancelled or postponed and entertainment venues, such as movie theatres, were closed. Professional sports matches were broadcast, but stadiums were closed to the public. Churches and temples also remained closed, with religious services broadcast over radio and television. Mass transit operated normally. ..Masks were provided for drivers and passengers and buses and subway cars were cleaned frequently (see Figure 6.1). Mitigation measures were broadly accepted by the public...Thousands of workplaces of all sizes in Mexico City and the rest of the country were closed for several days, taking a huge toll on the economy'.

Figure 6.1: 'Deadly swine flu outbreak sends wave of fear through Mexico City'

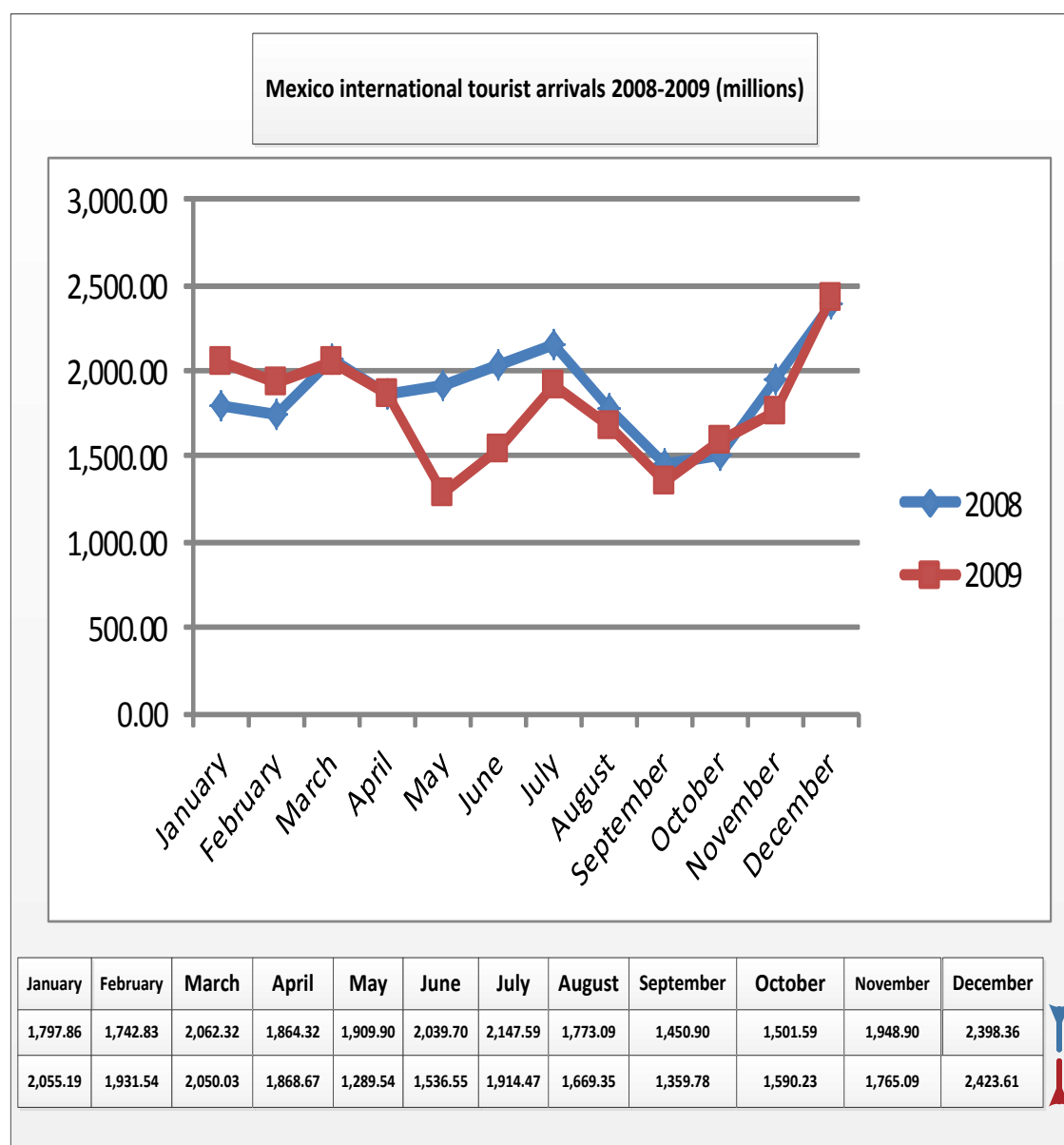


Source: www.telegraph.co.uk (2013)

6.3.2: Impacts on the tourism industry

Reflecting the impacts of previous health scares, such as the SARS outbreak of 2003 (see Dombey, 2003; Henderson and Ng, 2004; Mason *et al.*, 2005; Tew *et al.*, 2008; Zeng *et al.*, 2005), the news quickly began to dominate the world's media and international arrivals to Mexico decreased rapidly (see Figure 6.2 below).

Figure 6.2: International tourist arrivals to Mexico, January to December, 2008 and 2009 (millions)



Source: adapted from CESOP, 2010

It can be seen that until the end of April, when the Mexican government announced the outbreak of the H1N1 virus, arrivals had been higher than the previous year. They then drop sharply from this point until the middle of May when they begin to rise again,

although not reaching the heights of the previous year. July sees another fall, which is explained by the fact that it is the low season, corresponding with the Caribbean hurricane season. Arrivals begin to increase again in September, with October's figures being higher than the previous year. There is an upsurge in arrivals in November, and the year ends with arrivals figures slightly up on the year before.

The situation led to several governments issuing travel warnings about visiting Mexico and a number of airplanes were sent to repatriate tourists. One respondent describes the moment:

The initial impacts on the industry were of shock, as mainly the international side of the tourism industry went into paralysis...everything went down; the passengers, the hotels, the rooms; everything in tourism went down. People didn't want to leave their homes actually, and people from abroad didn't want to travel to Mexico. So basically everything was dead in these months of April and May. MR3

Despite the fact that by the 29th of April, nine more countries, including Britain, had reported cases of H1N1 Influenza (Monterrubio, 2009) the emphasis remained on Mexico where, strangely, there appeared to be many more mortalities than elsewhere. Indeed, for a short while Mexico became the epicentre of a worldwide panic as an alarming, potentially fatal disease spread around the world with unknown consequences. The effect on Mexican tourism was profound as is illustrated in Table 6.2 below, which details the initial stages of the crisis in chronological order from reports issued by Mexican newspaper *El Universal*.

Table 6.2: Chronological impacts of the H1N1 outbreak on tourism

<i>Chronological impacts of the AH1N1 outbreak on tourism Source – El Universal (various issues)</i>	
27th April	<ul style="list-style-type: none"> ➤ EU health commissioner warns against all but vital travel to Mexico
28th April	<ul style="list-style-type: none"> ➤ Reports of first cancellations in Yucatan Peninsula, a cruise ship of 2,500 passengers ➤ Flight cancellations from German travel agency
29th April	<ul style="list-style-type: none"> ➤ Cancellation of at least 25 cruise ship ➤ Hotel occupancy in Mexico City the lowest in 16 years
30th April	<ul style="list-style-type: none"> ➤ Cuba and Argentina stop direct flights to Mexico ➤ France seeks formal European ban on flights
1st May	<ul style="list-style-type: none"> ➤ Cancun – cancellations from US, Canada, Spain, Germany and UK ➤ Flight cancellations, hotel reservation cancellations, cruise ship cancellations in Mazatlan, La Paz, Los Cabos, Puerto Vallarta, Acapulco and Cancun
2nd May	<ul style="list-style-type: none"> ➤ Mexico has virtually no international Tourims ➤ Canada, Argentina and Cuba cancel all flights to Mexico ➤ Suspension of flights is multiplying and those that exist have few passengers ➤ Hotels report between 10 and 30% occupation in contrast to the usual 80% for this time of year
5th May	<ul style="list-style-type: none"> ➤ Camino Real Hotel in Polanco, Mexico City, report that only 40 of its 700 rooms are occupied. It is estimated that the crisis is costing Mexico City alone US\$100 million a day

Source: compiled from *El Universal* (various issues)

The worst affected area was Cancun. In the first two weeks of May, hotel occupancy fell to 21.4% and 22.9% respectively, in comparison to the normal levels of 67.1% and 72.6% for the time of year (CEPAL, 2010). Many hotels were forced to close temporarily which, in turn, led to numerous job losses.

A respondent explains the impact on Cancun and the surrounding region:

When the first case of H1N1 was detected in Mexico, people stopped travelling to this country. We were having, in Cancun and Playa Del Carmen, one of the best years ever. January and February had been fantastic, despite the world

financial crisis. Suddenly, when H1N1 began to be known as 'Mexican Influenza' everything changed. We passed from 90% occupancy to 10-15%. Many hotels, bars and restaurants had to close. Many flights were cancelled. It was the worst scenario since 9/11. MR4

6.3.3: Response of SECTUR and the CPTM

On the 26th of April 2009, at the tourism *Tianguis* (conference) in Acapulco, tourism leaders spoke of their unity in the face of a possible forthcoming crisis, although at this time there were no travel restrictions regarding Mexico. Nevertheless, rapid developments led SECTUR, the CPTM and FONATUR to form a monitoring and evaluation committee on the 1st of May. They would work in conjunction with major tourism destinations to observe the effects of the outbreak on the industry, which would in turn inform the content of a reactive crisis plan based on accurate information. Meanwhile, all international marketing activity was suspended (SECTUR, 2009a). A meeting of tourism business leaders and state and government tourism authorities a week later led to the formation of a three phased tourism crisis management plan which was released by the CPTM on May 8th (see Table 6.3 below). Realising that the path of the crisis lay out of their hands during the emergency stages, the initial impetus was given to a strong domestic campaign, followed by attempts to strengthen and form alliances and coordinate aspects of communication. Particular emphasis was given to the use of social media as a communication tool. The international campaign would only begin when the Centre for Disease Control and Prevention lifted its travel advisory warning and the World Health Organisation lowered the pandemic rating for the influenza.

The crisis management plan was part of an overall plan which was also aimed at protecting employment using various discounts, taxes and loans for businesses and employees, and also ensuring that air connectivity was upheld in the country's tourism destinations (SECTUR, 2009b).

Table 6.3: Tourism crisis management plan (translated from the original Spanish version)

Tourism crisis management plan (translated from the original Spanish version)	
Phase 1 – Immediate - Managing the crisis – no control	<ol style="list-style-type: none"> 1. Give accurate information in co-ordination with the Federal government, the Ministry of Foreign Affairs, the Ministry of Health and ProMexico. 2. Information to be given through official channels 3. Postpone international marketing 4. Give daily reports and information <p>Target the domestic market</p> <ol style="list-style-type: none"> 1. New national marketing campaign – “Vas por Mexico” 2. Co-ordinate communication with the tourism industry 3. Tailor made destination campaigns
Phase 2 – June/July - Strengthen alliances - Control, but not total	<p>Alliances (North America)</p> <ol style="list-style-type: none"> 1. Strengthen strategic alliances. Co-ordinate the product being offered and co-ordinate communication with the market 2. Witness testimony campaign. Use opinion leaders, consumers. Utilise social media – youtube, facebook, twitter 3. Public relations campaign- Use traditional methods and virtual methods. Work in co-ordination with the Federal government, the Ministry of Foreign Affairs, the Ministry of Health and ProMexico
Phase 3 – July and onwards – High impact international campaign – To be done when the Ministry of Health Organisation and the Centre for Disease Control and Prevention announce that Mexico is a safe destination	<p>Institutional campaign for the North American, National, European and Latin American markets.</p> <p>Tourism board – methods</p> <ol style="list-style-type: none"> 1. National TV, cable TV, radio businesses 2. Emphasis on internet <p>Allies – trading partners, tour operators, hotels, virtual travel agents airlines.</p> <ol style="list-style-type: none"> 1. Intensify public relations and familiarisation trips 2. Satellite media tours 3. Live press events in US and Canada 4. Universities (returning students to the US) <p>Development of business plan to motivate consumers to return to Mexico</p>

Source: CPTM (2009): PowerPoint document provided by respondent MR8, November, 5th, 2010

6.3.4: Signs of recovery

Despite the initial panic, it quickly became clear that H1N1 Influenza was not as deadly as originally feared. On the 15th of May, the US Centre for Disease Control and Prevention discontinued its travel advisory against Mexico, swiftly followed by the UK, Italy, Belgium, Switzerland, Israel, Argentina, Peru and Ecuador. The 19th of May saw the cruise ship *Sea Princess* welcomed at the port of Acapulco, a clear indicator that the crisis was leaving the emergency stage.

6.3.5: Vive Mexico

On the 25th of May, Mexican president Felipe Calderon announced the 'Vive Mexico' campaign, the title slightly changed from the originally planned 'Vas por México' (Go Mexico!) as seen in Table 6.3 above. In accordance with Phase One of the crisis management plan (Table 6.3), the aim of 'Vive México' was to promote domestic tourism. The government were to invest \$92 million US dollars in the campaign (Godwin and Baran, 2009), which would seek to provoke a resurgence of national pride and encourage Mexicans to travel within their own country. Various Mexican and international celebrities were invited to act as ambassadors for the country, and key stakeholders in the Mexican tourism industry, such as airlines, hotels, travel associations and tour operators were encouraged to work together under the same 'Vive México' slogan, offering attractive deals to stimulate interior tourism flow (SECTUR, 2009c).

6.3.6: Welcome Back: The North America campaign

June 17th saw the commencement of the international promotional campaign in key source markets throughout the US and Canada (in effect, Phase 3 of the CPTM tourism crisis management plan, as summarised in Table 6.3). The campaign was to consist of three phases ('Believe it'- 'Welcome Back'- 'Mexico- it's time to go') which were to run consecutively and would endorse the message that the influenza had been contained and it was once again safe to travel to Mexico. As the US and Canada are Mexico's principal source markets for international tourism, the campaign would primarily focus on these two countries, to be followed by Europe, Asia and Latin America (SECTUR, 2009d).

6.3.7: Recovery

The Mexican tourism industry appeared to recover from the crisis relatively quickly, as Speakman and Sharpley (2012: 6) report: 'By the end of May 2009, there was evidence that international tourists were beginning to return to the country and... normal levels of tourist activity were achieved by October. In 2010, Mexico attracted a total of 22.6 million international tourists, the same as the 2008 figure. Thus, despite the initial severity of the crisis, tourism in Mexico proved to be resilient, returning to previous levels relatively rapidly'. However, despite this fairly swift recovery from what at one point appeared to be a calamitous situation, the industry suffered the typical economic and resultant social impacts evident with tourism crises.

6.3.8: Crisis themes

On analysis, the Influenza outbreak provoked a convoluted crisis which revealed six distinguishing themes:

Government over-reaction: In a manner similar to the circumstances which occurred at the beginning of the FMD crisis, the Mexican government were accused of over-reacting to the situation by enforcing the shut-down in an effort to contain the influenza. While the government have been praised for their efforts in some quarters (Del Rio and Hernandez-Avila, 2009), others have criticised their measures aimed at rapid containment. Monterrubio (2010: 13), for example, remarks that the Mexican government were releasing figures which were later discovered to be scientifically unconfirmed, and that they made important decisions based on these unsubstantiated figures. An interview respondent also complained:

...we believed that this method was an over-reaction by the government...we have another case in the USA and they did not react the same as ourselves. I believe that the intention was good but I believe that these types of intervention to unknown risks do not take into account economic activity... There was not sufficient evidence of the virulence of this problem and a lot had been manipulated and badly managed not solely by our government but by the World Health Organisation....they also over-reacted to this problem and by saying the origin was in Mexico put us in the eye of the hurricane. MR5

In hindsight, it does appear that the government over-reacted but it must be borne in mind that the potential of the virus was as yet unknown and the 'response was based on early adaptation of a pandemic influenza preparedness plan that had been developed for a virus originating from abroad' (Bell *et al.*, 2009: 1964).

Slow response: Another respondent who has worked for both SECTUR and the CPTM, criticises what she sees as a slow response from the industry:

Despite the knowledge on the SARS crisis impact, official communication and speeches stated that the Mexican travel industry would not be affected. There was complete inaction for over two weeks....it took over one month for the then Minister of Tourism, Rodolfo Elizondo, to travel to New York and have a press conference explaining the situation in Mexico. I couldn't avoid the contrast compared to the 1985 earthquake crisis; in 1985 SECTUR's Minister of Tourism

was holding personal interviews in major media in US, Canada and Europe giving the best available exposition of the situation in Mexico City. MR6

While the Mexican Ministry of Health issued a health alert on the 13th of April, the situation was apparently not discussed by the tourism authorities until the Tourism Tianguis on the 26th of April, and an evaluation committee was not formed until the 1st of May.

Government support: Despite the criticism regarding over-reaction, it does appear that the tourism authorities were supported by the government throughout the crisis, reflecting the historical interest that the state has paid to the industry and the importance of tourism to the Mexican economy and providing a stark contrast to the British government's role in the FMD crisis.

Media and risk perception: As with the FMD crisis in 2001, there was an abundance of sensationalist media reporting. 'The effects experienced by the Mexican tourism industry, it can be concluded, did not derive from the actual impacts of the infection. Instead, these were partly a consequence of the alarmist tones of the media... it seems that the way the global and national media reported alarmist information contributed significantly to a feeling of panic amongst potential and actual travellers to and inside Mexico' (Monterrubio, 2010: 13).

Travel advisories and risk perception: Monterrubio (2010) also warns of the impact that occurs when governments place travel advisories on visiting a country. Despite the World Health Organisation advising against restrictions, advisories were implemented by the USA, the UK, Spain, Germany, Romania, France, Italy, Japan and China. Cuba, Argentina, Peru and Ecuador even suspended all flights to Mexico which obviously affected the risk perception of travellers. As Henderson (2003d: 28) points out 'official warnings have been shown to cause further difficulties for the tourism industry in the country and continental area where the destination is located, especially when events are the subject of worldwide publicity'.

Social media: Pennington-Gray and Pizam (2011: 321) believe that the crisis provided a particular example of the role social media has to play during the recovery. They state that: 'In addition to using conventional mass media, Mexico used social media to entice travellers back to Mexico. The Mexico case indicates that the role of the Internet and social media in disseminating updated information following a crisis is critical'. SECTUR and the CPTM particularly made use of the internet and social media to

provide regular information bulletins and in one example the National Institute of Anthropology and History promoted sites of interest abetted by Google Mexico and Youtube (Pennington-Gray and Pizam, 2011).

6.3.9: Summary

The account of the H1N1 Influenza crisis serves to clarify the main incidents which occurred during the crisis, the impacts of the crisis and to identify the response of the government and the principal tourism organizations. It also highlights several particular themes of the crisis which are worthy of mention, in that they were defining factors which contributed to the uniqueness of this particular tourism crisis.

6.4: Limitations of contemporary tourism crisis and disaster management models and frameworks

Chapter 2 criticised contemporary tourism crisis and disaster models and frameworks and presented several issues which potentially limit their effectiveness. Chapter 5 considered these issues as they were presented during the FMD crisis and they will now be explored within the context of the Mexican H1N1 Influenza crisis.

Conflicting stakeholder interests were not a significant issue, although it was noted that distrust of authority was widespread and that this would affect the application of crisis plans. Meanwhile, the crisis was not predicted by the tourism authorities, it was not planned for and the response was slow, suggesting that the application of prescriptive plans based on the crisis lifecycle would have been restricted due to the lack of a pre-event and prodromal phase. The fact that the crisis was played out in distinct locations would also have affected the application of the crisis lifecycle. Furthermore, the health crisis demanded a more comprehensive strategy than other natural disasters and the contextual elements related to national culture, destination structure and the government's relationship with tourism demanded a unique approach not provided in one-size-fits-all crisis plans. Finally, while government led coordination efforts appeared to be comprehensive, coordination issues were still apparent, suggesting that a change in approach, in the form of implementing a learning tourism destination, is necessary.

6.4.1: Organisational crisis and disaster management theory

Difficulty of implementing a collective strategy due to different perspectives:

As mentioned previously, there are obvious differences between the concept of a single business organisation and a tourism destination, even though authors such as Faulkner (2001), Scott *et al.* (2007), and Peters and Pikeemaat (2005) prefer to equate

the two entities in order to borrow directly from the organisational crisis management literature. One of the problems lies in the difficulties which can occur when attempting to coordinate and manage entities with conflicting self-interests, an issue not significantly prominent within business organisations. This was evident during the FMD crisis as some businesses made an unexpected profit from the crisis whilst others were brought to the brink of collapse. There was, however, no direct evidence of opposing interests being a significant factor during the H1N1 Influenza crisis in Mexico. Destinations were not overrun with government officials and scientists and it appeared that the adverse impacts were universal. Hence it was within the common interest to get matters back to normal as quickly as possible.

A point of interest related to the use of organisational crisis and disaster management theory in tourism crisis plans is that tourism destinations do not typically have a formal structure of authority and responsibility, as is the case in business organisations. While some tourism businesses and stakeholders are content to follow directives, many reject the idea and prefer to go it alone. Consequently, it is not possible to direct orders to the system's agents in order to harness a perfectly coordinated response, as some will follow instructions but others will refuse. This is especially pertinent in Mexico where there is a common distrust of authority due to long-standing issues of corruption and exploitation. This was particularly evident in smaller businesses, the owners of which believe that the government and the tourism authorities are only interested in helping large hotel chains and multinational businesses. Many of these businesses would likely deride the idea of pre-crisis planning and refuse to entertain crisis coordination attempts from SECTUR.

6.4.2: The unpredictability of crises and disasters

According to Condon and Sinha (2009: 11) 'Mexico was prepared for an influenza pandemic well in advance'. A plan was formed in 2006 in conjunction with the USA and Canada and based on directives issued from the World Health Organisation, which involved implementing social distancing measures such as closures and cancellation of public events. As mentioned above, many viewed the shut-down as being excessive; however, Condon and Sinha (2009) emphasise that this was all part of the plan and that 'criticism regarding the Mexican government's response ignores the complexity of recognising and responding to an unexpected public health emergency'. The Mexican government was prepared for an influenza outbreak although they were probably caught by surprise that it occurred in their own country, rather than the outbreak initially beginning in Asia as was expected (Cordon and Sinha, 2009). While the Ministry of Health had seriously considered the possibility of a health crisis, it appears that the

tourism authorities were less concerned, even though the Minister of Tourism was involved in the government's influenza crisis plan. Despite recent health crises, such as SARS and Avian Flu, and the ensuing increase in academic dialogue concerning tourism health crises (Capua and Alexander, 2002; Page *et al.*, 2006; Tew *et al.*, 2008), an influenza crisis was not predicted by the tourism authorities.

Contingency plans certainly existed for likely natural disasters, such as hurricanes and earthquakes (see SECTUR, 2011), and SECTUR held annual meetings with individual state tourism organisations each year to discuss crisis management issues. The CPTM also had an array of contingency communication plans and procedures in coordination with its public relations agencies in Mexico, North America and Europe. Nevertheless, the principal Mexican tourism organisations did not have a specific health crisis management strategy to deal with the H1N1 Influenza crisis when it emerged and neither did the majority of private tourism organisations. It was simply not expected, or predicted, as is revealed in the responses of several respondents when questioned over this issue:

We have plans for natural disasters because we have experienced natural disasters, hurricanes particularly...but as far as health issues are concerned there was no plan...unfortunately it was the first experience we had had. It was the first situation we had had like that...serious...it couldn't have been predicted. MR1

I know that the AH1N1 took the tourism authorities off guard, as everybody else in Mexico, and I also know that they didn't have a plan at the national or local level to cope with such a crisis. MR2

We did not have any plan. The crisis was unexpected and we were not ready for it. MR4

Quite why the Ministry of Health anticipated a crisis but this was not transferred to the Ministry of Tourism brings into question governmental coordination issues. Certainly, on a broader level it is understood that most tourism businesses and managers fail to consider academic advice. As mentioned previously, Hystad and Keller (2008: 160) have established that the 'majority of tourism businesses do not actively incorporate

disaster management strategies into their businesses'. One of the respondents spoke of this issue in relation to Mexico:

Regarding the Faulkner framework, you must understand that academic work is one thing, and the day to day tourism operation is a very different one. I mean, we academics work in a highly analytical, theoretical, reflexive world, while the tourism operators and destination marketing organisations work on a day to day operative basis, concerned about marketing, profits, competition and survival. ”
“You must not forget that Mexico is a third world country. I wonder whether decision makers really know what a crisis is and whether a crisis should be managed at all, like other countries. MR7

As with the FMD crisis, unpredictability is a specific feature of a health crisis.

It was a new thing for all of us. We never imagined it was going to happen. MR3

Thus, the unfamiliar novelty of the virus meant that nobody could accurately predict its path, impacts and conclusion.

6.4.3: The limitations of prescriptive models

It was argued that crises and disasters frequently by-pass the pre-event and prodromal 'lifecycle' phases and suddenly appear as emergencies. Furthermore, crises can evolve at differing rates and at distinct locations throughout the same country, thus complicating a linear, prescriptive response.

6.4.3.1: Tourism crisis lifecycle

Certainly, in the case of the H1N1 Influenza crisis, the pre-event stage did not occur as the tourism industry did not plan for a crisis of this nature:

They do have plans for natural disasters because we have experienced natural disasters, hurricanes particularly, so there might be some plans for certain situations but for us, as far as health issues are concerned there was no plan. Unfortunately it was the first experience we had had. I actually wonder whether we already have a plan, even in hindsight. MR7

As a result, the authorities formed a reactive response:

I know that the AH1N1 took the tourism authorities off guard, as everybody else in Mexico, and also know that they didn't have a plan neither at the national or

local level to cope with such a crisis; I guess that the tourism authorities took reactive measures, since they couldn't act in a proactive way. MR2

It could be argued that the Mexican tourism authorities had a short prodromal period in which they could have prepared their reactive response to the crisis; a health alert was issued by the Ministry of Health on the 13th of April and it was not until the 28th of April that cancellations began and the tourism crisis commenced. A response was being considered during the Acapulco tourism *tianguis* on the 25th of April, but it was not until the 1st of May that a monitoring and evaluation committee was formed; therefore an initial opportunity to devise a crisis response was not made use of.

6.4.3.2: Crisis played out at different locations

During the FMD crisis, distinct regions were either unaffected, or in the prodromal or emergency or recovery stage at the same time, which would have made it difficult for managers to follow step-by-step prescriptive plans. A similar phenomenon occurred in Mexico. With so many contrasting destinations existing within the same country, it became apparent that individual destinations would be affected in different ways and at different levels by the crisis, thereby necessitating quite different responses and tactics.
:

Cultural destinations such as Zacatecas and San Miguel have a lower number of visitors from outside and so were least affected. Destinations that receive local tourism were not so badly affected. The worst was Cancun because it is the number one destination for receiving international tourists. MR3

For example, Cancun is far more dependent on the international tourist than Acapulco, which has developed into a predominantly domestic destination with Mexico City as the main source market. Both destinations initially suffered a large drop in arrivals, as domestic, as well as international, tourists decided not to travel; however, both destinations required quite distinct communication and marketing strategies and at different times (see Table 6.4).

Table 6.4: Cancun and Acapulco: similar initial impact, but different response

CANCUN	ACAPULCO
Fonatur's diamond. This resort on Mexico's Caribbean coast has met with huge success since its inception in the 1970's. Main market- US and Canada.	The traditional Mexican beach resort has lost some of its original glamour, but still attracts many people, predominantly from Mexico- Main market- Mexico City.
Effect of H1N1 crisis- Cancellations, huge drop in hotel occupancy, job losses.	Effect of H1N1 crisis- Similar to Cancun; however, more short-lived.
Strategy for recovery - 'Welcome Back' recovery campaign, focused on the international market	Strategy for recovery - 'Vive México' campaign, focused on the domestic market.

Source: Adapted from Speakman (2011)

As is shown in Table 6.4, the initial impacts of the H1N1 Influenza crisis on Cancun and Acapulco were very similar, although longer lasting in the case of Cancun. However, the recovery strategies were of necessity completely different owing primarily to the fact that Cancun caters for an international market while Acapulco accommodates a mainly domestic market.

6.4.4: A one-size-fits-all approach

Contemporary tourism crisis and disaster management plans are limited by their 'broadness'. That is, they only appear to offer what could be described as a one-size-fits-all approach, with the same guidelines prescribed for every conceivable crisis situation. The models do not consider that different crises warrant different responses, as obviously crises differ in size, scope, complexity and setting.

6.4.4.1: Size and scope of tourism crises and disasters

The previous chapter compared the FMD crisis with the Katherine flood and concluded that the former was much more geographically and temporally diverse than the latter, thus necessitating a quite different approach. Likewise, the H1N1 Influenza crisis can be compared with previous Mexican tourism disasters, such as the 1985 Mexico City earthquake or Hurricane Wilma in 2005, which caused significant damage in Cancun:

Hurricane Wilma was a specific event, as was the earthquake of 1985. For both those occasions we had a contingency plan because we knew beforehand that

they were very likely to happen. The Influenza crisis was different and required a very different strategy than those 'natural' events. The influenza crisis was more of a social crisis, and creates a very difficult set of circumstances because you don't know how people are going to react or what will happen. MR1

The H1N1 Influenza crisis, being a health crisis, demanded a much more comprehensive strategy due to the 'sinister' connotations of a health crisis: 'Where the crisis includes a perception of risk, especially health, more comprehensive strategies appear necessary. This includes management of the media, especially images displayed during the crises. Then, post-crisis aggressive marketing is needed that does not remind target markets of the crisis, but presents an image of 'business as usual' (Zeng *et al.*, 2005: 318). The response by Real Resorts Hotels is an example of a specific, comprehensive marketing strategy:

We started a campaign called 'Flu Free Guarantee'. The idea came from our General Director, Mr. Fernando García. We published it on our web page. We promoted it during trade shows and tourism fairs in all 2009. What did it consist of? Well, we guaranteed that our Resorts were flu free. And we offered a free week at our Resorts for 3 consecutive years if a lab stated that a guest contracted the flu 14 days after his departure from one of our Hotels. MR4

The point worth noting here is that an intensive national promotional campaign, on the scale of 'Vive México', was not required after Hurricane Wilma in 2005; neither was it necessary for hotels in Cancun and surrounding areas to offer special 'guarantees' to their customers. The psychological effect on tourism perception was totally different on both occasions and each situation required a quite different response.

6.4.4.2: The contextual elements of a crisis or disaster

It is argued that a one-size-fits-all approach does not recognise variations in national culture, destination culture, destination structure organisational and political structure.

Contextual element- National culture

In a rather indirect manner, a particular Mexican cultural trait contributed to the spread of the influenza virus and the onset of the tourism crisis. This trait can be labelled 'self-medication' and it refers to a widespread preference of Mexicans to self-diagnose their illnesses and prescribe their own medication without visiting a doctor. This can be attributed to financial and time constraints, availability of over the counter antibiotics and the tradition of following health advice given by *la abuela* (the grandmother) and

her frequently bizarre home remedies. For such reasons, many people suffering from H1N1 Influenza did not visit a doctor or hospital until their symptoms worsened and their condition became more serious. This contributed to the spread of the disease and most likely to the increased mortality rate within Mexico. In fact, Castañeda (2011) implies that the Mexican government deliberately over-stated the seriousness of the influenza as they realised that was the only way that the general population would react.

This is an example of a cultural trait affecting a situation, in this case the spread of H1N1 Influenza in Mexico. In a similar way, cultural characteristics influence the adoption of crisis management plans.

You can develop, say, a great model that may work in first world countries, but how can you be sure that they will work in developing countries where situations are different, people are different and governments are different?

MR7

The respondent is referring to general cultural differences between countries. What may work in one location may not be so successful in another. In the case of Mexico, the respondent suggests that the long-standing scepticism and mistrust of authority mentioned earlier (section 6.4.1) has led to a state of affairs in which directives are often ignored:

If a model suggested to inform people, to educate people in crisis management, in the case of Mexico I am sure many people would say 'I don't believe that - that is a political issue- because we have experienced many lies'...Are these things considered in tourism crisis management models?' MR7

A culture of mistrust indicates that crisis management plans would fail as people would refuse to cooperate: 'If citizens do not trust authorities and their communicators, it is very hard to reach and influence them during a crisis situation' (Falkheimer and Heide, 2006: 182).

National culture: attempts to change the culture of the tourism industry

The inherent culture of a tourism destination is one of the main factors influencing its success. It has been argued that a destination which indorses knowledge sharing and seeks to recreate itself as a learning destination will become more resilient to crisis and will achieve greater sustained success. However, the nation's innate culture can prove

an obstacle to establishing such a condition as it can reject the essential components necessary to do so. For example, Culebro Moreno and Askvik (2010) note that in 1999 the Mexican government were in the process of creating the tourism promotional organisation, known as the Mexican tourism board (CPTM). They wanted to design a joint-autonomous organisation in which flexibility and autonomy were predominant features and hoped to follow a formula that had been successful in France, Spain, Britain, Ireland and Canada. However, they quickly discovered that the new organisation encountered 'a number of administrative, financial, legal and cultural constraints...' in which the 'formal structure copied from abroad [had] a very limited impact on the activities which [were] eventually put into place' (Culebro Moreno and Askvik, 2010: 329). This is because it had to adapt to the 'specific institutional environments of Mexico: that is, the regulative, normative and cognitive components that make up the main institutions of Mexican society in general, and its public sector in particular' (Culebro Moreno and Askvik, 2010: 342). The regulative (legal) environment meant that an amount of autonomy was lost as the tourism board was subjected to the regulations which dominate the Mexican public sector.

Patrimonialism, centralisation and power distance are values and norms which pervade Mexican society (Culebro Moreno and Askvik, 2010) and, despite attempts to create flexible and autonomous structures within the organisation, major decisions were always made at hierarchical levels in keeping with these culturally entrenched elements of the nation's culture. Furthermore, the 'cultural-cognitive components' – 'the taken-for-granted categories that the members of a society use to interpret social processes and relationships' (Culebro Moreno and Askvik, 2010: 344) -common throughout the Mexican collective society- caused difficulty when attempting to install new management techniques which emphasise an individualistic approach. 'The challenge consisted in finding a balance between a national culture characterized by a persuasive sense of authority and formalized behavior that rewards loyalty to the political group on the one hand, and on the other values which promoted greater autonomy, flexibility and freedom to managers' (Culebro Moreno and Askvik, 2010: 345). This example demonstrates the complexities encountered when endeavouring to create a learning organisation, an issue which will be given more thought in the following chapter. Importantly, it illustrates some of the difficulties posed when attempting to transform the cultural mind-set of a nation.

Despite the desire to establish the tourism board as a learning organisation and the introduction of tourism clusters in various locations, one respondent, who has previously worked in the CPTM, does not believe that SECTUR or the CPTM are

seriously introducing measures to incorporate knowledge and organisational learning into the travel industry:

I don't think that they are very flexible or innovative. I believe that they have a model of tourism operation and development that has been working and has been good for them, but maybe not for the whole country. The lack of flexibility and innovation has settled the Mexican tourism industry into stagnation; the model of tourism development doesn't change- sun and sea, mega resorts, golf courses and marinas. MR2

The respondent believes that not enough is being done to spread knowledge and learning throughout Mexico as a destination. It is only being done within a few destinations, an issue that will be discussed shortly.

Contextual elements- Destination culture

The Mexican tourism industry, while better equipped than the British tourism industry in terms of government support and funding, was not functioning as a learning destination at the time of the H1N1 Influenza crisis. There were a number of cluster models, which will be considered shortly, but these were individual initiatives and did not extend to the destination as a whole. As a result, a 'crisis culture' did not exist, and consequently when the crisis began the Mexican tourism industry was unprepared.

Contextual elements- Destination structure

While the British tourism industry struggled to make itself heard during the FMD crisis, the interconnected structure of the principal Mexican tourism authorities of SECTUR, the CPTM and Fonatur and their position as public agencies meant that they did not have to contend with other ministries or unions. Perhaps the only time it could be argued that the tourism authorities were not taken into consideration was in regards to the shut-down when the demands of the Ministry of Health took precedence. The influence of SECTUR in the Mexican government is much more powerful than that of the DCMS in the UK in 2001, due to the contribution that tourism makes to the economy and the efforts that the state has exerted over recent decades to develop tourism.

Contextual elements- The Mexican government's relationship with tourism

Government intervention in the tourism industry in Mexico has been very intense over recent decades with the state effectively taking the role of planning agent (Bringas Rábago, 2002) under the guise of SECTUR, FONATUR and, more recently, the CPTM,

which has led to the development of successful destinations such as Cancun and Los Cabos and an influx of much desired foreign exchange. In 2008, for example, SECTUR was coordinating eight tourism projects which included Teseros Colonials (colonial treasures), Centros de Playa (beach resorts), Pueblos Magicos (magic villages) and Mundo Maya (Mayan world) (Wilson, 2008). Less attention has been paid, however, to the lack of funding given to local and regional destinations, which have had to rely on local investment (Pick *et al.*, 2001). This has culminated in a situation where there is an uneven distribution of resources within the Mexican tourism system.

The levels of organisation or readiness in these kinds of offices widely differ among Mexican tourism organisations, according to the importance that the tourism industry has in the regional economy. You will find highly organised destinations like Cancun, the Mayan Riviera, Puerto Vallarta, Los Cabos, Guadalajara or Monterrey against destinations with secondary importance, like Manzanillo, Mazatlan, Ixtapa, Huatulco, etc., with diminished organisation capabilities. MR6

It thus appears that Cancun is much better equipped to deal with a tourism crisis than, for example, Manzanillo, and it also appears that levels of management training and preparedness differ widely within the country. Many destinations appear to be seriously lacking in financial resources and staff capability.

Generally speaking, most of the tourism authorities in Mexico are improvised, without the knowledge, experience or preparation required to perform in an appropriate way as destination marketing organisation managers. MR6

The research suggested that a principle reason for such significant differences in destination organisational capability could lie in the amount of foreign investment within the resorts and the amount of tax which emanates from a resort. For example, Cancun has received huge investment from multinational companies such as Hilton, Marriot and Barcelo, which cannot afford to lose their investments, while significant tax revenues emanate from the resort, thus ensuring its ongoing maintenance and support in times of crises. A destination such as Manzanillo, conversely, does not enjoy this level of investment or governmental interest, thus making it more vulnerable to the impacts of crises and disasters.

Funding for a national marketing recovery strategy was not the predominant issue it was in the FMD crisis. The industry received approximately £728 million for their

promotional campaign (Monterrubio, 2010), which dwarfed the money that the British tourism industry received from the government in 2001. This demonstrated the significance of the tourism industry to the Mexican government and the fact that a designated, committed government tourism ministry was coordinating the response.

6.4.5: Lack of coordination

According to Ritchie (2009: 146): 'Understanding and working with key internal and external stakeholders is a major requirement in managing crises and disasters successfully'; consequently, 'collaboration is required between different organisations, government departments...media organisations' (Ritchie, 2009: 148) on a local, regional, national and international scale.

The National Tourism Development Plan, redeveloped with each presidential administration, is the framework through which the government sets the guidelines for coordination with local government, the private sector and other industry actors (OCDE, 2001). Levels of coordination established by the National Tourism Development Plan were useful when planning the strategic response to the H1N1 Influenza crisis.

The government, through SECTUR, instigated a number of measures to coordinate the crisis response at ministerial level, throughout the country's destinations and with the different sectors of the industry:

- *April 25th*: Federal government activate the 'Frontera Group' to provide information on influenza outbreaks. The groups involved were the Ministry of Tourism, Ministry of Foreign Affairs, National Institute of Immigration and Customs (SECTUR, 2009a).
- *May 1st*: SECTUR, the CPTM and FONATUR set up a monitoring and evaluation committee to obtain an accurate diagnosis of the situation (SECTUR, 2009e)
- *May 7th*: SECTUR request information from major tourism destinations. There is a meeting with various government ministries and with tourism business leaders and associations. The groups involved are SECTUR, Ministry of Finance and Public Interest, Ministry of Economy, Ministry of Work and Social Welfare, Ministry of Foreign Affairs, Association of Hotels and motels, National Chamber of Restaurants, Resort Development Association, National Tourist Business Council, National Tourism Confederation, Confederation of the National

Chambers of Commerce, Services and Tourism and the Governors of Quintana Roo, Jalisco, Nayarit, Baja California and Guerrero (SECTUR, 2009f)

- *May 11th*: Plan to respond to crisis which involves (i) an employment protection plan (tax relief, loans, etc.) (ii) tourism promotion plan (iii) air connection plan. Groups involved in the Employment Plan are SECTUR, Ministry of Work, Ministry of Social Development, Ministry of Finance and Ministry of Economy. Groups involved in the Promotion Plan are SECTUR, CPTM, Ministry of Finance, Ministry of Health, Ministry of communications and Transport, Ministry of Foreign Affairs, Ministry of Agriculture, Ministry of Education, Presidential Office, ProMexico, Mexican and the Embassy in Washington. Groups involved in the Air Connection Plan are SECTUR, Ministry of Finance, Ministry of Communications and Transport (SECTUR, 2009g).
- *May 13th*: Meeting with state secretaries to discuss response strategies. Groups involved are SECTUR, state secretaries of Queretaro, Morelos, Puebla, Mexico city, State of Mexico, Guerrero and Hidalgo, the Ministry of Economy, Ministry of Work and Social Welfare, Ministry of Social Development, FONATUR, CPTM, NAFIN-BANCOMEXT. Meeting of various tourism ministers; this involves SECTUR, tourism ministers and representatives of the State of Mexico, Morelos, Puebla, Mexico City, Hidalgo, Guerrero and Queretaro (SECTUR, 2009h)
- *May 14th*: Meeting of state secretaries involving SECTUR, Governor of the State of Yucatán, Tourism Secretaries of Campeche, Chiapas, Quintana Roo, Tabasco, Yucatan and Veracruz (SECTUR, 2009i)
- *May 18th*: Meeting between SECTUR and members of the National Tourist Business Council. Groups involved are SECTUR, Mexican Resort Development Association, Mexican Association of Fairs, Expositions and Conventions, National Association of Chain of Hotels, House Trucking National Passenger and Tourism, Mexican Association of Water Parks and Resorts, National Air Transportation Board, National Chamber of Restaurants, National Confederation of Travel Agencies, Federation of Hotels, Residences and Historic Hotels of Mexico, Cancun Hotel Association and the State Councils of Tourism of Mexico City and Morelo (SECTUR, 2009j)
- *May 22nd*: Final meeting of state secretaries. The groups involved are SECTUR, governor of Sinaloa, tourism secretaries of Tamaulipas and Chihuahua, the Director of the Tourist Development Corporation of Nuevo Leon, and

representatives of the Secretaries of the states of Baja California, Baja California Sur, Coahuila and Sonora. There are business meetings with tourist state and municipal authorities. Groups involved are Acapulco and Ixtapa-Zihuatanejo, Guerrero, Cancun, Quintana Roo, Puerto Vallarta, Jalisco, Riviera Nayarit, Nayarit and Los Cabos, Baja Southern California. Business meetings with tourism leaders at Los Pinos (Presidential Headquarters). Groups involved are SECTUR, Grupo Posadas and Mexicana Airlines, Aeromexico, Interjet, Volaris, Mexican Association of Hotel Chains, National Chamber of Restaurants Industry, Miguof Interjet, National Tourist Business Council Grupo Dine, Group Palace Resorts, Ministry of Economy, Ministry of Communications and Transport and the Presidential Office (SECTUR, 2009k).

Despite the efforts of SECTUR, there were still concerns that coordination could have been improved.

...different segments of tourism, hotels, restaurants, SME's, big businesses, through their cameras and organisations that represent them, must work in a more co-ordinated way to react faster...faster...to see the way that they can help each other. MR1

While the above list of coordination processes demonstrate the efforts made by SECTUR, the comment by the respondent illuminates the difficulty of coordinating the large, fragmented tourism industry in times of crisis. The SECTUR led coordination efforts were superior to the disjointed British response, but, nonetheless, there were still issues which limited the crisis response.

6.4.6: Summary

The events surrounding the H1N1 Influenza crisis in Mexico serve to illustrate the limitations associated with the contemporary tourism crisis and disaster models. The case study provides an empirical example of how crises are often unpredictable to the tourism industry, that they do not necessarily follow the suggested crisis 'life-cycle', and that they require different responses according to the specific character of the crisis and individual destinations. It demonstrates how the unequal distribution of resources in Mexico led to an irregular response, how cultural issues can again change the complexion of the situation, and how the media response can create huge negative repercussions for what in reality may be a fairly trivial problem. Furthermore, it demonstrates that small businesses, which comprise a major part of the tourism industry, do not generally adopt a pro-active approach and are often left without any

form of assistance and that despite intense efforts to co-ordinate stakeholders by DMO's, there still exists problems relating to slow responses and poor communication. It would be appropriate to finish this section with the words of a respondent:

I think in a way they [tourism crisis management models] suggest things work automatically; if I do 'Z' then this happens...things do not work like that. I think they are quite simplistic in that they believe that things will automatically react in a certain way, in a certain direction....without taking into account that every crisis is unique ... different... MR7

6.5: Elements of complexity theory in the H1N1 Influenza Crisis

The following section explores the H1N1 Influenza crisis for evidence of the elements of complexity theory. All the elements are present, as with the FMD crisis. The Mexican tourism industry, despite benefiting from state led intervention, was nevertheless fragmented as destinations widely differed in resources and capabilities. It did not exist in the edge of chaos state and consequently was unprepared for the crisis, hence episodes of cosmology during the bifurcation stage. The 'Vive Mexico' domestic campaign unwittingly served as an excellent tool to stimulate self-organisation, using national pride as a strange attractor to facilitate emergence. Again, the response would have been improved if the crisis had been managed from a complexity based perspective.

6.5.1: Edge of chaos

According to organisational management literature, the edge of chaos is a state to be desired and pursued, as it is in this 'zone' that complex adaptive systems become more inventive, flexible and ultimately resilient to crises and disasters. The potential of improving individual destinations' competitiveness has not gone unnoticed in Mexico and a number of destinations have been used as 'cluster' models. A tourism cluster is defined as 'a geographic concentration of companies and institutions interconnected in tourism activities' (Estevao and Ferrereira (2009:4) in the same manner as a tourism learning destination.

One such destination was Guanajuato in Central Mexico, a domestic and international tourist attraction. The destination was found to be suffering from poor strategic planning, communication and infrastructure, fragmentation in the business sector, inadequate training, a declining urban environment, technological limitations in small

businesses and a shortage of tourism offices. SECTUR consequently formulated a strategic plan which focused on:

- i. Competitiveness (diversify products, manage competitiveness, use modern techniques, support viable projects, standardize quality, create a market intelligence system, train human resources).
- ii. Growth (harmonic development and controlled, increased appeal and value, economic diversification, improve working conditions, creating tourism experiences).
- iii. Physical well-being (protect the natural and urban environment, encourage local product sales, check the tourist flow (avoid high concentrations), raise the standard of living and social conditions).
- iv. Emotional well-being (improve work culture, engaging society, encourage teamwork, improve the perception of tourism efforts).

As a result, there have been several improvements to Guanajuato which include five new tourism products, integration of rural tourism, infrastructure, urban environment, natural resource conservation and an information system. SECTUR stress that performance has been strengthened which can be measured by increased revenue collection, tourist flows and job creation (SECTUR, 2001).

Nonetheless, the creativeness and innovation apparent in Guanajuato was not replicated throughout the country. The Mexican tourism industry was better supported than the British tourism industry of 2001, which lacked a unified voice and sufficient government backing, but it is was not functioning as a complex adaptive system/ learning tourism destination. There was a distinct lack of inventiveness and flexibility in many parts of the Mexican tourism industry and, consequently, these parts were unprepared for the H1N1 tourism crisis and struggled to cope on an individual basis, mostly from the fall in domestic tourism.

6.5.2: Butterfly effect

The butterfly effect suggests that sometimes trivial occurrences can initiate certain conditions which produce a path of circumstances that eventually lead to a disaster. In a tourism context, this concept helps to explain how a set of natural reactions which culminated in a volcanic ash cloud appearing over the UK and Europe in April 2010 led to unprecedented travel chaos and damage to the airline industry worldwide. As with the FMD crisis, it is important to consider exactly what the trigger was that caused the tourism crisis. It was argued in the previous chapter that it was the actions of the British

government and the media that provoked the tourism crisis, not the actual disease itself.

The reaction of the Mexican government has likewise been strongly criticised by some commentators for being overly cautious and even rather careless. For example, one respondent condemned the release of unconfirmed figures to the media:

The figures were first reported within Mexico and those figures were not scientifically supported. MR7

Others regard the shutdown as wholly unnecessary:

...it was the first time in Mexico and sincerely we believe it was an over-reaction. There was not sufficient evidence of the virulence of this problem and a lot had been manipulated and badly managed. MR5

Others believe that the media and the over- reaction of other countries was also to blame:

Global media response and many countries have been partners in this huge scam. Everyone did their part to create the fear. MR9

The shut-down impacted upon the tourism industry and coincided with the first cancellations. However, it is suggested that the *nature* of H1N1 Influenza (the fact that it appeared to be fatal in some cases) was more to blame for the tourism crisis than the government response. That is, it is likely that a tourism crisis would have arisen even *without* the Mexican government's reaction, as tourists were concerned that they themselves could contract the disease. This is unlike the FMD crisis in which the actions of the government *directly* provoked the crisis. The trigger which provoked the butterfly effect in this case was the disease, or to be more precise, its origin. From the point of its origin (still unknown at the time of writing), a chain of circumstances occurred which resulted in the H1N1 Influenza being contracted by a number of people in Mexico, which ultimately led to the tourism crisis. As in the UK in 2001, no evidence was found of measures having been taken to nullify the negative impacts of the butterfly effect or to enhance the positive impacts. Various cluster zones may have increased resilience but, in general, positive issues emerging from the crisis were more of a result of reactive, rather than proactive, measures.

6.5.3: Bifurcation and cosmology

Bifurcation occurs when the system changes or even breaks down as a result of alterations to the environment, such as a crisis or disaster. This occurred in Mexico as a result of the H1N1 Influenza outbreak and its effect upon the risk perception of travellers which resulted in a crisis for the tourism industry. International tourism came to a halt and domestic tourism suffered a huge downturn, as detailed earlier. Cosmology refers to episodes of disorientation and uncertainty provoked by the crisis. It was evident throughout Mexico at the point of bifurcation, as described by several respondents:

For a time everybody was very scared. It was like the end of Mexico. MR1

The initial impacts on the industry were of shock; mainly the international side of the tourism industry went into paralysis in about a week or two, and not only the incoming tourism sector but also the export tourism sector. MR10

It is possible that this confusion and fear contributed towards some hastily made decisions by the government. In hindsight, the shut-down was found to have been rather unnecessary and, as mentioned previously, figures were delivered to the media which had not been scientifically confirmed: 'In the case of influenza A (H1N1), it seems that the way the global and national media reported alarmist information contributed significantly to a feeling of panic amongst potential and actual travellers to and inside Mexico. Additionally, the unconfirmed data reported by the federal government and the implemented measures based on such data enhanced panic among travellers' (Monterrubio, 2010a:13). In their defence one of the respondents explained:

The Mexican government and travel authorities had had the opportunity to observe the SARS crisis and the negative impacts that such a crisis had on tourism. One perception was that the Chinese government had tried to hide information from the public and had taken too long to take strict measures. The reaction of the Mexican government tried precisely to avoid a similar reaction. MR11

Despite the disapproval directed towards the government, the research demonstrated that certain effective communication strategies were put into place by the tourism authorities in the bifurcation phase of the H1N1 Influenza crisis. For example, international marketing was suspended:

It was not the time to show images of Mexico. We had to wait until people knew that the situation was improving. MR10

Information was given through official channels coordinated by SECTUR and regular bulletins were given on an internet website.

6.5.4: Self-organisation, strange attractors and emergence

There are two significant aspects of chaos and complexity theory. One of these is the unpredictability, uncertainty, complexity and turmoil, which were all present during the opening stages of the H1N1 Influenza crisis. Another characteristic of chaos and complexity theory is the return to order which appears after bifurcation. Self-organisation refers to the capability of complex adaptive systems to adjust their structure so as to adapt to changing conditions; in tourism this occurs between the various destination operators who come together to form cooperative relationships (Breakey, 2006). Alternatively, individual firms may self-organise which, likewise, results in a natural, holistic, universal response from the system's agents enabling the system to 're-emerge in an even more competitive manner' (McKercher (1999: 427).

It has been established that the Mexican tourism industry was not functioning as a complex adaptive system on the edge of chaos at the dawn of the influenza crisis. Nevertheless, there were numerous examples of self-organisation and strange attractors being present throughout the duration of the crisis. Perhaps the most significant example to be had is the 'Vive Mexico' marketing campaign. Following bifurcation, the key to recovery involves the facilitation of methods in which the system can work in unison towards its common goal of recovery. The 'Vive Mexico' campaign facilitated this process by encouraging Mexicans to work together in solidarity, which corresponds with Zahra and Ryan's (2007: 855) description of a strange attractor as being a 'common vision, sense of meaning, strategy or value system that drives people to achieve a common goal'. It can be presumed that SECTUR was not aware of the strange attractor concept, but even so it was successfully utilised to encourage the emergence of the tourism industry from the influenza crisis.

There are a number of practical recovery marketing strategies, related to self-organisation, which may be implemented as the crisis moves into the intermediate stage and these were in evidence throughout, as described by Speakman and Sharpley (2012): '...the 'vive Mexico' campaign...successfully stimulated the domestic market with tailor-made destination campaigns and special offers, such as reduced-

price vacations and two-for-one offers. At the same time SECTUR and the CPTM joined with Mexicana airlines to promote 'vive Mexico' and other alliances were also undertaken with tour operators, hotels (in particular, the Grupo Pasadas chain) and so on. Moreover, the North American promotional campaign was begun, assisted by various strategic alliances with other government ministries (health, finance, agriculture, communication and transport, education, foreign affairs) consulates, embassies (particularly the Mexican embassy in Washington) and the foreign offices of the CPTM and Promexico (a government agency designed to strengthen Mexico's economic position). The CPTM intensified their public relations campaign, particularly in the US and Canada, with a number of press events and familiarisation trips for journalists'.

The North American 'Welcome Back' campaign also indirectly produced an outcome which can be linked to the 'lock-in' effect associated with complexity theory. The campaign targeted customers who had already visited Mexico, including those individuals and families that frequent Cancun on a yearly basis. For such people, Mexico has a special 'pull'- they appear to have an affinity with the country, or at least a particular resort:

I come here [Cancun] every year with my family, well nearly every year- we missed one year because of the swine flu scare, but now we are back and it's like nothing happened. It's great here, it has everything for us. MR12

On an individual scale, while many businesses were forced into closure which resulted in lingering social effects in the form of unemployment and forced migration, critically, the majority of small and medium sized enterprises did survive the crisis and examples of innovation, creativity and self-organisation were evident in the research. For example, when questioned about the challenges they faced during this stage of the crisis, two respondents replied:

It was a matter of looking at things in perspective and realising this month [May] was a loss but we could work on marketing, developing strategies, and improving our products and staff, so that when tourism started we could be ahead of competition in quality. We couldn't rely on government help so it was a matter of getting ourselves organised. I think most companies had this outlook. It has certainly made us more competitive. MR9

We did not fire employees. The company asked all executives with higher salaries to auto-reduce their incomes. In this way we could help the company's economy and save hundreds of employees. Everybody could keep his job. Some actions can be taken individually and some other can be taken together with Hotels Associations. You cannot sit around and wait for the Government's support. MR4

Tourism businesses, therefore, discovered novel ways of making their organisations more efficient which enabled them to not only survive the crisis, but also to become more competitive in the process.

6.5.5: Summary

The case study demonstrates that the complexity theory elements of butterfly effect, bifurcation, cosmology, self-organisation, strange attractors and emergence were present during the H1N1 Influenza crisis in Mexico.

Table 6.5: H1N1 Influenza crisis incidents and complexity theory elements

H1N1 influenza crisis incident	Complexity element
Unprepared industry	Edge of chaos
Origin of the disease	Butterfly effect
Tourism crisis	Bifurcation
Panic	Cosmology
Common goal of destination recovery	Strange attractors
Vive Mexico campaign	Self-organisation
Crisis ends with improvements to the industry	Emergence

Judging by the visitor arrivals and hotel occupancy (the usual statistical criteria of success in the tourism industry) of 2009, the Mexican tourism industry demonstrated considerable resilience to the H1N1 Influenza crisis, despite an obvious lack of crisis preparation by the tourism authorities and by tourism stakeholders. In October 2009, just a few months after the height of the crisis, visitor numbers were actually slightly higher than the previous year (see Figure 6.2). It seems that the industry, in general, rose to the challenge, helped by the responses of SECTUR and the CPTM which perhaps unwittingly encouraged the process of self-organisation and emergence. As

such, it provides an example of how recovery can be enhanced when the element of self-organisation is encouraged and allowed to flourish.

6.6: Restructuring the Mexican tourism industry of 2009

Despite the existence of a number of tourism clusters in various locations, the Mexican tourism industry did not function as a complex adaptive system on the edge of chaos at the time of the AHN1 influenza outbreak. This section considers whether it would have provided a more effective response if such a system had been in place.

The first issue to consider is the institutional organisation of the Mexican tourism industry. It was suggested in the previous chapter that, in order to transform the British tourism industry into a holistic tourism learning destination, it would be necessary to establish a national DMO that has the full support of the government. This would help provide a unified, coherent response to crisis and disaster situations that would not be frustrated by a lack of funding and industry coordination. The institutional organisation of the Mexican tourism industry does not need to be modified in such a way, as SECTUR was already functioning as a national destination management organisation prior to the influenza outbreak, one which incorporated its own functions and those of the CPTM and FONATUR, and had adequate backing from the government due to the importance of tourism to the national economy. However, as described in the previous sections, the industry was not without its problems and, therefore, the task for SECTUR, like a new British national tourism organisation, would be to create the conditions for self- organisation and emergence by attempting to transform all of the country's destinations into learning regions and coordinating knowledge sharing and shared learning processes throughout the whole destination. Each destination would be designed according to the principles such as those demonstrated in Moles and Mole's (2003) Learning Area Process model and McMillan's (2002) Fractal Web, so that the Mexican tourism industry effectively becomes an interlinked complex adaptive system, existing on the edge of chaos.

Tables 6.6 and 6.7 list the negative issues which surrounded the influenza crisis and the industry in general and suggests how they might have been diminished if the Mexican tourism industry had been functioning as a complex adaptive system at the time of the outbreak.

Table 6.6: How the impacts from the H1N1 Influenza crisis could have been modified if the Mexican tourism industry had been functioning as a complex adaptive system: Limitations of contemporary models

Limitations of contemporary models	Issue	Mexican tourism industry as a complex adaptive system (CAS) situated on the edge of chaos
The difficulty of implementing a collective strategy- different perspectives	Conflicting interests: No clear evidence of this as a particular issue. However, mistrust of authority is evident.	Autonomy is encouraged so very little intervention from authority. The onus is the self-organisation and bottom-up processes.
Unpredictability	Influenza crisis not predicted by tourism authorities and this resulted in a slow response.	Edge of chaos state leads to adaptability and resilience. For the Mexican tourism industry unpredictable change is considered normal.
Limitations of prescriptive models	<p>Did not follow the crisis lifecycle</p> <ul style="list-style-type: none"> ➤ No pre-event stage to the crisis lifecycle led to lack of preparedness and slow response. ➤ Slow response of tourism authorities meant that the crisis arrived in the emergency phase. ➤ Distinct impacts on destinations/regions led to management confusion. 	<ul style="list-style-type: none"> ➤ The industry is already prepared for crisis; it is functioning as a learning tourism destination which has facilitated the formation of a 'loose' crisis plan detailing responsibilities and examples of best practice. ➤ Information is diffused throughout the destination and responses are quickly formed. The crisis knowledge database allows for rapid formulation of plans. ➤ Conditions have been created to facilitate individual destination self-organisation without DMO interference.

Limitations of contemporary models	Issue	Mexican tourism industry as a complex adaptive system (CAS) situated on the edge of chaos
One size fits all	<p>➤ Size and scope of crisis: Health crisis different from previously encountered disasters involving hurricanes and earthquakes.</p> <p>Contextual elements:</p> <p>➤ General culture-Traditional Mexican culture proving an obstacle to the implementation of learning organisations.</p> <p>➤ Destination culture-Crisis culture did not exist.</p> <p>➤ Destination structure- stronger supporting structure due to government interest meant that the industry did not lack a coherent voice although the fragmented nature of the industry still affected coordination.</p> <p>➤ Government relationship with tourism Uneven distribution of resources.</p>	<p>➤ Conditions in place to facilitate a response regardless of nature of crisis.</p> <p>➤ The culture created by the learning tourism destination has created the conditions to challenge traditional views, although there have been adaptation difficulties.</p> <p>➤ A tourism learning destination has led to the development of a crisis culture.</p> <p>➤ The culture of collaboration associated with a learning region has improved cohesion among stakeholders.</p> <p>➤ Creation of a country wide learning region has provided an even distribution of resources. The industry is now functioning as an inter-connected entity.</p>
Lack of coordination	Coordination between segments of the industry rather slow at times.	The learning destination culture has vastly improved industry wide collaboration and coordination.

Table 6.7: How the impacts from the H1N1 Influenza crisis could have been modified if the Mexican tourism industry had been functioning as a complex adaptive system on the edge of chaos: Elements of complexity theory

Elements of complexity theory	Issue	Mexican tourism industry as a complex adaptive system (CAS) situated on the edge of chaos
Industry is not functioning as a CAS on the edge of chaos	The Industry has never been developed as a tourism learning destination; therefore, it is generally unprepared to respond to the H1N1 tourism crisis.	The Mexican tourism industry is a tourism learning destination, in effect, a CAS on the edge of chaos. It is integrated, flexible, and robust and has established a strong crisis culture. It is prepared for the H1N1 Influenza tourism crisis.
Fail to recognise butterfly effect concept	Industry badly affected by negative butterfly effect (nature of the disease) and unprepared to take advantage of positive butterfly effects.	Functioning as a CAS enables the industry to mitigate the negative effect and profit from the positive effects.
Fail to recognise the bifurcation and cosmology concepts	Bifurcation and cosmology episodes in the government, tourism industry and the population as a whole as a result of the nature of the disease.	The industry is functioning as a CAS and consequently is adaptive to change. It is ready to self -organise and emerge from the crisis and bifurcation is accepted as a normal process. The values and beliefs adopted by stakeholders become the strange attractors which guide them through bifurcation and cosmology.
Fail to recognise the self-organisation and emergence concepts	Evidence of self-organisation as a result of the 'Vive Mexico' campaign and within individual businesses.	The industry is specifically structured so as to encourage the self-organisation process and it has developed a culture which draws its 'agents' towards the strange attractors that lead to emergence.

As with the FMD crisis of 2001, it appears that the response would have been improved had the Mexican tourist destination been functioning as a complex adaptive system in the form of a national learning destination. The dominance of SECTUR meant that the industry had a recognisable DMO with appropriate government backing; however, although the concept of learning destinations had been explored in the form of several tourist clusters, the country could in no way be considered a national learning destination. The success of the 'Vive Mexico' campaign, in which Mexican businesses were encouraged to promote themselves and domestic tourists were urged to support the industry, particularly highlighted the concept of self-organisation and emergence, and what could be achieved if it was actively nurtured as a daily process.

6.7: Summary

Within the context of the H1N1 Influenza crisis, the overall purpose of this chapter has been (i) to explore the limitations of contemporary tourism crisis and disaster management models, (ii) to seek the presence of complexity theory elements, and (iii) to consider if the crisis response would have been improved if the tourism crisis had been managed using complexity theory principles. The limitations discussed in Chapter 2 were all present and it is considered that they would have affected the application of a tourism crisis management plan, such as Faulkner's (2001) framework, to this particular crisis. Likewise, complexity theory elements were present throughout the course of the crisis as it moved from the butterfly effect to emergence. On reflection, it was suggested that if the 2009 H1N1 Influenza crisis had been managed using strategy derived from complexity theory, the response would have been improved as the Mexican tourism industry would have developed in advance the necessary crisis culture to deal effectively with unexpected negative change.

Chapter 7

Conclusion

7.0: Introduction

Throughout this thesis it has been argued that traditional tourism crisis and disaster management models and frameworks are limited because they are over-reliant on theory which was developed with organisational crises in mind, and they fail to appreciate the uniqueness of each crisis and disaster in terms of geographical, temporal and cultural scope. As a consequence, complexity theory has been advocated as an alternative framework from which to plan, respond and analyse tourism crises. Specifically, complexity theory allows for a destination to be viewed as a system which is complex but, at the same time, able to adapt to change as and when it occurs. Moreover, complexity theory also provides a new perspective for understanding the causes of these events and the path that they take, suggesting concepts which provide ideas to diminish the negative features of crises and encouraging the positive aspects which are often apparent following such a situation. Thus, the purpose of the research was to identify whether the proposed limitations of crisis and disaster management models are indeed evident in practice and if a complexity-based perspective on tourism crisis and disaster management represents a more viable framework for managers of tourism destinations preparing for and responding to crises.

A number of objectives were specified to achieve the aim of the research:

- Examine critically Faulkner's (2001) framework and also consider applications of the framework and other tourism crisis management models;
- Determine the issues which limit tourism crisis and disaster management frameworks;
- Consider the elements of chaos and complexity theory in relation to tourism crisis and disaster management;
- Explore the extent to which the proposed limitations of crisis management models and the elements of complexity theory have been manifested in practice, specifically during the FMD tourism crisis and the H1N1 Influenza tourism crisis.

- Establish whether complexity theory would have provided a viable framework for the management of the FMD tourism crisis and the H1N1 Influenza tourism crisis.

The following sections consider these objectives in detail. Firstly, the common issues related to tourism crises and disasters are taken into account. Secondly, Faulkner's (2001) framework, its applications, and other tourism crisis management models, are contemplated in detail. Next, the issues which limit the models and the relationship between complexity theory and tourism crisis management are discussed drawing on examples from the case studies to emphasise the argument. Finally, the section finishes by establishing whether, in the light of the conclusions derived from the case studies, complexity theory provides a viable framework for the management of tourism crises and disasters.

7.1: Contextual background

In order to provide a contextual background to the study, several important issues associated with tourism crises and disasters were introduced. It was first considered essential to provide definitional clarity for the terms 'crisis' and 'disaster'. Nonetheless, this was problematic as no precise definition exists, merely an array of classifications which often serve to confuse rather than illuminate. It was understood that this was not purely a matter of ignorance, as the provision of a distinct definition for 'crisis' and 'disaster' is a genuinely complex matter. Despite the general consensus that crises and disasters can be separated by their origin, it was accepted that the decision to label an event a 'crisis' or a 'disaster' tends to be subjective and often open to ambiguity. However, not lacking in ambiguity is the near certainty that a destination will experience a crisis or disaster at some point. Even small incidents can accelerate and affect destinations both near and far and, consequently, no destination is immune from a potential crisis or disaster. These can appear in the form of economic, political, socio-cultural, environmental, technological and commercial upheavals (Henderson, 2007) and can cause both negative *and* positive impacts. Perhaps the most significant negative impact is the decline in tourism on both a domestic and an international basis. This subsequently leads to a loss in revenue, business closures, event cancellation, slowing of investment and socio-cultural disharmony.

7.2: The objectives

7.2.1: Examine critically Faulkner's (2001) framework and also consider applications of the framework and other tourism crisis management models

Having considered various essential tourism crisis issues, from lack of definitional clarity to crisis impacts, it was an appropriate moment to examine Faulkner's (2012) framework in detail. According to Speakman and Sharpley (2012: 2), this framework could be said to 'epitomise contemporary models of tourism crisis and disaster management'; therefore, it demanded comprehensive scrutiny.

In general, Faulkner's (2001) framework consists of an integrated yet diverse combination of theory from numerous disciplines designed to prepare and steer public and private tourism organisations through a crisis. In particular, Faulkner (2001) utilised organisational crisis management and disaster planning theory, and produced the tourism crisis lifecycle which forms the basis of the framework. Faulkner and Vikulov (2001) successfully applied the framework to a flooding disaster in Australia. However, the general prognosis of the framework, following further applications, was that while it was appropriate for incidents of relatively small size and scope, it was not suitable for larger, more complex situations. Further models and frameworks have been developed which either augment Faulkner's (2001) framework or offer an alternative structure, but these too were found to have their limitations.

7.2.2: Determine the issues which limit tourism crisis and disaster management frameworks; also explore the extent to which the proposed limitations of crisis management models and the elements of complexity theory have been manifested in practice, specifically during the FMD tourism crisis and the H1N1 Influenza tourism crisis

The following limitations needed to be identified and, furthermore, investigated to ascertain if they were manifested in the context of a real life tourism crisis scenario:

Organisational crisis and disaster management theory:

Difficulty of implementing a collective strategy due to different perspectives

The first limitation concerned the influence of organisational crisis and disaster management theory on Faulkner's (2001) framework. This theory is useful to a certain degree. For instance, it provides the crisis lifecycle. However, significant variations in scope and character between the physical and intangible dimensions of a business organisation and a tourism destination, in particular the homogenous nature of a business organization compared to the fragmentation of the tourism destination, suggest that concepts which are

applicable to the former may not be appropriate to the latter. This limitation was certainly evident during the FMD crisis, as small business owners experienced opposing effects from the crisis. A minority of businesses, such as a number of guest houses and hotels, received an unexpected bonus as their rooms were fully booked by the authorities investigating and dealing with the crisis. This conflicted with the reality for thousands of other businesses that were suffering as a result of a severe downturn in business. Consequently, this suggests that a tourism crisis plan assuming universal stakeholder collaboration would be compromised by various actors who, for reasons of personal gain, might be unwilling to comply with directives.

There was, however, no evidence that tourism businesses held conflicting perspectives during the H1N1 Influenza crisis in Mexico. Although there undoubtedly were exceptions which the research failed to uncover, the same situation, in which the authorities booked entire hotels for a period of months, did not occur. In this case it appeared that all stakeholders wanted a return to normality as quickly as possible. Nonetheless, a worrying feature revealed during the research in Mexico was the large level of mistrust in authority, to the point where it became apparent that many small businesses would not wish to become involved in a crisis plan affected by the authorities. Such was their scepticism in a government-applied solution that many admitted that they would prefer to face the crisis alone, rather than from under the umbrella of a state-led strategy. The fact that, in a sense, many *did* unwittingly act from under this umbrella during the 'Vive Mexico' campaign does not detract from this large scale distrust, and it further serves to question the viability of crisis plans which appear to presume stakeholder collaboration.

Unpredictability

The second limitation is related to the unpredictable nature of crises and disasters. Contemporary tourism crisis plans generally concur that crisis preparation can be achieved by conducting risk assessments and scenario analysis and forming contingency plans for 'predicted' situations. However, the unpredictable manner in which crises occur, evolve and impact means that 'predicted scenarios' will be incorrect in at least some aspect, meaning that the contingency plan devised from the scenario will inevitably be affected. The unpredictable nature of crises and disasters was manifested in the FMD crisis. What made this event particularly noteworthy, from a tourism crisis management perspective, was the fact that it was the government's actions that provoked the crisis, rather than the arrival of the disease. When news broke of the FMD outbreak, the British tourism authorities presumed it was merely an agricultural matter and thus took no action; for them an FMD outbreak did not constitute a tourism crisis, and it was only when the government put into

effect their disease eradication measures that the crisis for tourism began. Consequently, it is doubtful that any crisis scenario exercises would have taken this into consideration. It is also unlikely that scenario planning would have anticipated the seemingly random manner in which the crisis would surface in different locations, sometimes weeks apart.

Similarly, despite meetings taking place each year in Mexico between SECTUR and the state tourism organisations to discuss crisis management issues, the potential scenario of an epidemic health crisis had not been taken into account by the Mexican tourism industry. Therefore, the Mexican tourism authorities had not predicted the H1N1 Influenza crisis, even though the government had plans in place for such an event. Tourism crisis plans existed for 'predictable' crisis situations common to Mexico, such as earthquakes and hurricanes, but there was not a specific health crisis management plan in existence. Additionally, as with the FMD crisis, it is doubtful whether a contingency plan would have anticipated the global impact that the incident provoked and formulated a suitable strategy. In hindsight, the H1N1 Influenza crisis was overstated, blown out of proportion by the world's media, but during its emergency period when the extent of the danger remained unknown, it was a frightening experience for those concerned and it had a severe impact on Mexican tourism, both international and domestic.

The limitations of prescriptive models

The third limitation again concerns unpredictability but, specifically, emphasises the unpredictable manner in which crises evolve. Unforeseen developments serve to confuse managers attempting to follow the prescriptive, somewhat rigid, guidelines offered in contemporary plans. Furthermore, managers strictly adhere to the details of the plan, despite possibly being aware of more suitable alternative strategies.

The FMD crisis failed to follow the tourism crisis lifecycle. There was no pre-event phase owing to the lack of pre-crisis planning and the crisis continually evolved in an unpredictable manner, with some locations entering the intermediate or recovery phase, while others were still in the prodromal phase. A similar situation occurred in Mexico. There was no pre-event phase and the authorities did not take sufficient advantage of the prodromal phase to respond to the situation. Also, specific regions were affected in distinct forms and consequently managers would have had difficulty using linear prescriptive plans to steer their way through the crisis lifecycle.

One-size-fits-all approach

The fourth limitation remains focused on the rigid nature of these crisis plans. In this context, however, the concern is not with the step-by-step guidelines but, rather, the manner in which frameworks, such as Faulkner's (2001), offer a one-size-fits-all approach, allegedly suitable for every tourism crisis. This is deemed unrealistic because each and every tourism crisis occurs within a distinct geographical and temporal context. That is, crises and disasters are inherently unique in size, scope and duration and thus require a distinctive response strategy each time. Furthermore, every crisis is strongly influenced by the cultural context of the affected destination. Therefore, the national culture, the destination culture, the destination structure and the government's relationship with tourism all affect the level of crisis planning and response of the tourism industry.

In terms of size, the FMD crisis affected a substantial area in various locations from Scotland to Southern England. Regarding the scope of the crisis, some destinations suffered severe impacts while others were unaffected, or even benefitted, from displaced trade. Meanwhile, London was impacted by a significant reduction in international tourists, whereas Cumbria, for example, felt the repercussions emanating from the decrease in domestic tourists. The FMD crisis was also temporally uncertain; as soon as managers believed that they were entering the recovery phase, another incident would arise, thus regressing to the intermediate phase.

A similar situation existed in Mexico. Geographically, the crisis affected all the tourism destinations throughout the country. In terms of scope, some locations, such as Cancun, were affected by a decline in the number of international tourists while others, such as Acapulco, suffered from the lack of domestic travelers.

The broad geographical and temporal dimensions of the two case studies and the scope of the impacts would have likely affected the application of a one-size-fits-all model. They serve to demonstrate that the same crisis management plan cannot be applied to all events, as the *nature* and *characteristics* of crises differ to a large extent. That is why a crisis plan successfully applied to a flood (see Faulkner and Vikulov, 2001) is limited when employed on a crisis with diverse geographical and temporal dimensions. Furthermore, while both the case studies shared similar characteristics relating to their geographical and temporal context, a common generic plan still could not have been applied successfully to both crises as they occurred within very different cultural settings. For example, even though Britain's cultural dimension of uncertainty avoidance suggests that pre-crisis planning is unlikely, and Mexico's mistrust of authority also indicates a reluctance to partake in crisis planning,

significant distinctions in destination culture and the government's relationship with the tourism industry imply that a standard plan for both crises would have been futile. Britain's destination culture was rather lacking in belief and energy whereas that of Mexico, although certainly not exhibiting the desired 'crisis culture' necessary for an efficient crisis response, appeared to be slightly more coherent and harmonious. Nonetheless, the greatest differences between the two tourism industries were found in the structure of the respective industries and the governments' relationship with their tourism industry. The British tourism industry suffered as a result of being under the auspices of the relatively low level Department of Culture, Media and Sport, which faltered in its efforts to facilitate a collaborative and coordinated industry. The Mexican tourism industry, conversely, guided by the inter-connected SECTUR, CPTM and Fonatur, was better structured than the British tourism industry as a direct result of SECTUR's powerful influence in the Mexican government.

It was, therefore, evident that a universal tourism crisis plan would not have been viable in the case of the FMD crisis and the H1N1 Influenza crisis. Both crises demanded a unique strategy, tailor-made for their particular circumstances, which took into consideration the size, scope and duration of the crisis and the contextual elements in which it occurred.

Lack of coordination

The fifth and final limitation involves coordination issues. While contemporary tourism crisis plans insist that facilitating coordination among stakeholders is a vital aspect of crises preparation and response, it is frequently offset because of various problems which impede the process. This was illustrated during the FMD crisis as coordination issues became apparent between the tourist industry and the agricultural industry, the tourist industry and the government and within the tourism industry itself. It was also evident to some extent in the H1N1 Influenza, although not to the same magnitude.

In summary, all of the limitations were evident in the case studies to some degree, enabling conclusions to be drawn based on the evidence gained from the case studies.

- (i) The use of organisational crisis models, originally devised as a framework to guide business organisations through a crisis, ignores the basic differences between a business organisation and a tourism destination. Consequently, a tourism crisis plan constructed using this theory will exhibit inherent weaknesses, as the presumed homogenous nature of the entity undergoing the crisis is misplaced and does not cater for differences in stakeholder perspectives.

- (ii) A major weakness of contemporary theory, which practically encompasses three limitations, is the failure to consider the element of unpredictability. Firstly, even if scenario plans have identified the crisis, and contingency plans have been prepared, it is likely that the erratic manner in which the crisis evolves and the subsequent impacts would have not been accurately predicted. Secondly, for those managers attempting to follow the strict guidelines of a contemporary tourism plan, the changeable, unpredictable path which crises regularly undertake can provoke confusion, while fears of deviating from the plan can stifle the required innovation necessary to respond to the crisis. Thirdly, in a similar manner, the one size fits all perspective of these models does not consider the unpredictable variety of tourism crises and the often unpredictable contextual elements in which they occur.
- (iii) Contemporary tourism crisis models tend to presume coordination can be achieved under any circumstances. Both case studies noted numerous coordination difficulties and it is suggested that unless the destination is specifically structured to facilitate the processes of coordination and collaboration then it will remain a major drawback to tourism crisis management plans.

Various commentators had advocated chaos and complexity theory as an alternative theoretical framework to the management of tourism crisis and tourism in general. However, research has been limited and, consequently, it has remained a theorised possibility rather than a practical reality. The fourth objective of this thesis, therefore, was to explore chaos and complexity theory in the context of tourism crisis management. This was achieved through the utilisation of Choi *et al*'s (2010) 'Underlying dynamics of a complex adaptive system' model as a framework from which to discuss elements of complexity theory.

Several of these elements were selected for particular examination and subsequently investigated to determine if they were manifested in the context of a real life tourism crisis scenario:

7.2.3: Consider the elements of chaos and complexity theory in relation to tourism crisis and disaster management; also explore the extent to which the proposed limitations of crisis management models and the elements of complexity theory have been manifested in practice, specifically during the FMD tourism crisis and the H1N1 Influenza tourism crisis.

Edge of chaos

Complex adaptive systems which exist in a state between stability and chaos are said to be at their most innovative and productive. It likewise follows that a tourism destination (itself being a complex adaptive system) will be more competitive if it is situated on the edge of chaos. Essentially, in the context of this thesis, it will become more resilient to crises and disasters. A tourism destination can attempt to enter the edge of chaos zone by becoming a learning tourism destination which, effectively, is an expansion of the concepts related to organisational learning. A destination can become a learning tourism destination if the destination management organisation, government agencies and industry associations begin to act as intermediaries to facilitate the generation, sharing, storage and processing of knowledge, both crisis related and otherwise, among the destination's stakeholders so that the destination ultimately consists of a myriad of interconnected businesses which exhibit the characteristics associated with creativity and robustness. By doing so, the destination will be, in essence, functioning like a complex adaptive system on the edge of chaos

The British tourism industry of 2001 did not exist within the edge of chaos. The levels of innovation and resilience associated with being on the edge of chaos were not identifiable throughout the industry. While there existed small pockets of inspiration in the form of clusters, the industry as a whole was structurally fragile and unprepared for crises and disasters. This was a result of a lack of leadership which ultimately stemmed from the British government's historical apathy towards tourism. This had hindered the formation of a national DMO which could have facilitated the changes necessary to create a learning tourism destination.

Meanwhile, in spite of the fact that the Mexican tourism industry was in many ways structurally superior to the UK, and despite having SECTUR to function as a national DMO, the destination as a whole cannot be said to have existed in the edge of chaos. As in Britain, there were a number of tourism clusters in existence, but this was not replicated throughout the country in the form of a nationwide learning destination and, consequently, many destinations were unprepared for the H1N1 crisis and struggled to cope.

Therefore, while the edge-of-chaos was not manifested, as such, in the case studies, its absence served to demonstrate its importance. That is to say, both destinations were unprepared for their respective crises and, therefore, suffered the consequences. If they had been structured to function as a complex adaptive system on the edge of chaos, as in a learning tourism destination, it appears that their preparedness and response to the crises would have been much improved.

Butterfly effect

The butterfly effect emphasises the unpredictability of a complex system, as small changes can prove a catalyst to significant change, often negative but usually with positive consequences further along the line. Tourism crises and disasters are often the result of butterfly effects somewhere in their internal or external environment and, therefore, their existence reinforces the view that a destination needs to be prepared for the seemingly inevitable.

The butterfly effect was present in both case studies. It was suggested that the butterfly effect for the FMD *tourism* crisis came in the form of the government's disease eradication measures, rather than the origin of the disease which, instead, was the butterfly effect for the agricultural crisis. This is because the government measures were the actual *trigger* for the tourism crisis; they were the catalyst which culminated in the FMD outbreak not only causing a crisis for the agricultural industry but also for the tourism industry. The H1N1 Influenza crisis was different inasmuch as it was the actual *nature* of the disease that caused the crisis. Consequently, the origin of the H1N1 Influenza crisis was the butterfly effect which provoked a tourism crisis for the destination of Mexico. Even though the situation intensified with the government shutdown, sensationalist reporting and various countries issuing travel advisories not to visit Mexico, these factors did not provoke the tourism crisis. Rather, it was people's fear of contracting a potentially fatal disease which caused them to change their plans, be they domestic tourists who decided not to travel within Mexico, or foreign tourists cancelled their holiday plans in Mexico.

Bifurcation and cosmology

Bifurcation refers to the point when the system changes, often as a result of the butterfly effect. This change could result in the demise of the system or it could lead to an improved level of performance. Crises are points of system bifurcation and they are regularly accompanied by episodes of cosmology, which refers to the panic which is often evident among the system's agents. Prescriptive crisis plans which do not adhere to the reality of the situation can intensify these cosmologic incidents as managers struggle to deal with their

feelings. It is argued that a destination that has developed a 'crisis culture' by becoming a learning tourism destination will be able to quickly adapt to bifurcation and minimise cosmology.

Bifurcation and cosmology were manifested in both of the case studies. Both crises can be described as system bifurcations, while episodes of cosmology were evident. For example, the outbreak of FMD created a bifurcation for the agricultural industry while the subsequent government reaction served to create a state of bifurcation for the tourism industry. Bifurcation was accompanied by cosmology as signs of panic were evident in the agricultural industry, the government, MAFF and the tourism industry. Also, the outbreak of H1N1 Influenza in Mexico provoked a bifurcation and widespread incidents of cosmology among the Mexican government, the tourism industry and the population in general.

Self-organisation, emergence and strange attractors

The ability of a system to emerge from bifurcation depends on its capacity for self-organisation. Self-organisation occurs when a system's agents organise themselves by facilitating novel procedures which enable the system to adapt to its new environment. The process is known as emergence and it is evident in the appearance of new improved configurations to the system which have been developed without outside interference. The force which enables this to happen is called a strange attractor. Strange attractors characterise the notion of order within chaos. They are akin to magnets, in that they 'pull' the agents in a particular direction, to lead the system away from chaos to a new emergent state of being. An example is a forest rejuvenating following a calamitous fire, or an organisation's employees uniting under a common sense of purpose following a negative event.

These three concepts help to explain the reason why tourism destinations often recover quickly from a crisis, even without much help from the authorities. Importantly, these processes can be encouraged; that is to say, a destination can be transformed into a learning destination and structured so as to facilitate self-organisation and emergence. For example, McMillan (2002) designed the Fractal Web so as to replicate a complex adaptive system and ultimately the concepts of self-organisation and emergence, not to mention the other elements associated with complexity theory and complex adaptive systems. It is true that McMillan (2002) had an organisation in mind when creating her Fractal Web, but the same notion can be applied to a tourism destination. Meanwhile, Moles-Moles (2003) conceived the Learning Area Process model exclusively for the tourism destination. Similar in concept to the Fractal Web (2001), it utilises the notion of a complex adaptive system, as

all the system's components, or the destination's stakeholders, work in unison to advance the system, or destination.

The elements of self-organisation, emergence and strange attractors were manifested in the case studies, although not as a result of the destination being specifically assembled in such a way as to encourage the processes; as previously noted, neither destination was operating as complex adaptive systems on the edge of chaos. In Britain, during the FMD crisis, self-organisation occurred in the tourism industry without outside intervention; that is, tourism organisations and businesses instinctively adopted methods of self-organisation which led towards emergence. The common goal of crisis recovery can be referred to as the strange attractor which pulled the destination in crisis towards recovery, just as the crisis itself was a strange attractor which pulled a stagnant destination towards crisis, but ultimately towards emergence and an improved state of being. The same processes happened in Mexico. There were numerous examples of tourism businesses adopting innovative measures to ensure their survival. In fact, the 'Vive Mexico' campaign serves as an excellent (although inadvertent) example of how self-organisation can be actively stimulated and facilitated by the tourism authorities, while the 'welcome back' campaign exemplifies how the 'lock-in effect' can be encouraged.

It was, therefore, verified that the complexity theory elements introduced in Chapter 3 were manifested during the case studies. This leads to the final objective, which was to establish whether complexity theory would have provided a viable framework for the management of the FMD tourism crisis and the H1N1 Influenza tourism crisis.

7.2.4: Establish whether complexity theory would have provided a viable framework for the management of the FMD tourism crisis and the H1N1 Influenza tourism crisis.

A dual scenario was imagined in which Britain and Mexico, as tourism destinations, have been transformed into learning tourism destinations under the guidance of a national DMO and with the support of their own governments. The destinations are, in essence, 'a supra system', a collective devised from all of the learning destinations across their respective countries. They are structured in a manner similar to the models provided by Moles-Moles (2003) and McMillan (2002) and, as such, they naturally incorporate complexity principles into their daily operations. Importantly, a 'crisis culture' has evolved as a result of the set of beliefs and attitudes instilled into the destination and through regular inter-regional conventions and workshops which discuss crisis and disaster issues. These meetings have

brought about the creation of an inter-connected knowledge base, available to all stakeholders and to be distributed during crises and disasters.

The adoption of a crisis culture would have changed the manner in which the destinations' tourism organisations and enterprises perceived crises and disasters. Consequently, the delayed reaction of the tourism authorities in both countries to the onset of the FMD crisis and the H1N1 Influenza crisis would have been avoided and a suitable crisis strategy would have been employed much earlier. Also, the cosmology episodes which were apparent in both case studies during the emergency phase of the crises would simply not have appeared, as the crisis-avert destinations recognise bifurcation for what it is and respond to it in a calm and assured manner by activating the tourism central command centre and enacting the policies and procedures detailed in the flexible crisis plan. Even though self-organisation, strange attractors and emergence were manifested in both crises, the situation would have been improved upon if the destinations had been operating as complex adaptive systems on the edge of chaos. It would have provided the environment for organisations and enterprises to form a collaborative and coordinated response guided by a common sense of purpose.

Of course, care must be taken when expressing the general conclusion that a complexity theory based approach to tourism crisis management would have provided a solution to the problems posed by the FMD and H1N1 Influenza tourism crises and possibly other tourism crises. While complexity theory has its advocates (Choi *et al*, 2001; Macbeth, 2002; Tetenbaum, 1998), Burnes (2005: 80) informs us that 'Many writers from within and outside the scientific community have expressed doubts about the validity of complexity theories...For every study supporting complexity, a host of criticisms seem to be raised.' As such, it would be prudent to carefully consider the authenticity of a concept which is still largely unproven in the world of human complex systems because, as Burnes (2005: 85) states, 'new ideas are often prematurely transferred into normative prescriptions' before they have been given sufficient contemplation.

There are three outstanding issues which detract from the applicability of complexity theory as an academic framework for exploring tourism crisis management. Firstly, the manner in which complexity theory is employed as a metaphor rather than as a scientific form of analysing and managing organisations; secondly, essential differences between natural and social systems; and thirdly, as will be addressed in the following section, the complex practical difficulties which are likely to be present when attempting to form a learning destination.

Complexity theory as a metaphor:

Burnes (2005: 86) argues that complexity theory appears to be merely a metaphorical device to gain insight into the workings of an organisation: '... there is a world of difference between restructuring an organization because science has discovered that this action is necessary, and doing the same thing because that is what a computer simulation has shown that a flock of birds would do if faced with wind turbulence. The former is proven and testable fact, the latter is merely a metaphorical device'. Therefore, while it could be argued that metaphorical concepts such as the butterfly effect offer a useful means of perceiving complex systems, the lack of tested scientific theory underpinning a complexity theory approach to organisational, and in this case destination, management results in complexity theory somewhat losing its 'prescriptive force' (Burnes, 2005: 86). Consequently, Burnes (2005: 86) concludes: 'It is especially important that those who seek to promote complexity-based prescriptions for managing and changing organizations should make it clear that these are not, as yet, based on any hard evidence that they actually work.'

Distinctions exist between the natural and social sciences:

It is also important to consider whether a theory that is based on biological and natural systems is appropriate for the study of a social system. For example, Levy (2000: 82) notes that there are essential differences between physical and natural systems and social systems: 'It is important to acknowledge that complexity cannot simply be imported from the natural sciences and applied "off-the-shelf" to industries and firms. Future work needs to develop the concepts and analytical methods to take account of fundamental differences between social and natural sciences, relating to the nature of uncertainty in the social world; the degree of complexity entailed in multiple interlocking economic, social, political, and economic systems; and the role of human agency'. Stacey (2003) likewise advises caution, advising that people inadvertently use free will, pursue their own objectives and interpret things differently; this differs from the concept of the flocking birds in which birds somewhat mechanically follow simple rules without question.

Perhaps, when considering the applicability of complexity theory as a tourism crisis management framework, it would be appropriate to bear in mind Allen's (2001) suggestion that complexity theory explores the "what might be," rather than the "what is" or "what will be." While it stimulates intellectual contemplation of what could be, it is as yet an unproven concept in tourism crisis management. Complexity theory certainly offers a number of interesting concepts, which, as this thesis demonstrates, hold potential as an academic

framework for crisis management, but its limitations must not be forgotten in an eagerness to provide a solution for the limitations of conventional models.

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In addition to these issues relating to the theoretical suitability of complexity theory as academic framework for tourism crisis management, reality dictates that there would also be numerous practical difficulties in the formation of a learning destination and this is discussed in detail in the following section.

7.3: Learning tourism destination – a practical perspective

It has been determined that complexity theory would be useful as an academic framework for exploring crisis management. Therefore, from a theoretical perspective, it can be implied that becoming a learning destination would be an effective strategy for other destinations wishing to improve their resilience to crises and disasters.

Nevertheless, it must be acknowledged that there would be challenges to achieving this in reality. While the concept of the learning organisation has been successfully implemented by many companies (Popescu *et al.*, 2007), there is little evidence of the concept being successfully applied to a tourism destination. Indeed, Saxena (2005: 288), investigating three learning regions in the Peak District National Park, noted various implementation difficulties and commented that ‘the local acceptance of policies relating to tourism development remains limited’. It was argued earlier in the context of crisis management planning that theory and concepts which have been developed for a business organisation are not necessarily transferable to a tourism destination. The same could be said to apply with the implementation of a learning destination – as Schianetz *et al.* (2007: 1486) remark, ‘an LTD framework needs to take into account that tourism destinations differ considerably from those organisations where the LO [learning organisation] concept has been implemented with demonstrable success’.

The fact is that business organisations are different in both scope and character and presumptions that are made in the context of organisational development may not apply to destination development. For example, a business organisation, as mentioned earlier, can be confident of a collective response to strategy; however, there are no such ‘guarantees’ with the components of a tourism destination. A business organisation is also able to refine and utilise human capital, financial capital and technological capital in ways often not possible in a tourism destination. This can be explained in more detail by considering what Sharpley (2009) labels ‘tourism capitals’. Sharpley (2009: 176) argues that each destination possesses a variety of ‘capitals’ which can be of benefit to its economic and sustainable

development. This framework can also be used as a means to demonstrate the practical difficulties that can occur when attempting to establish a learning tourism destination and ways in which they can be overcome.

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These assets will be considered individually.

Socio-cultural capital: As well as being thought of as tangible cultural assets (for example, historic buildings), or intangible capital (such as traditional lifestyle), socio-cultural capital can also be conceived as the community-wide collective will to embrace and adapt to tourism (Sharpley, 2009). It is described as a 'resource that arises from relationships or interaction between people or groups of people, that resource being manifested in, for example, trust, mutual support and cooperation, or a collective will to work towards particular objectives, and that creates value through actions which result in benefits for society' (Sharpley, 2009: 160-161). Consequently, if this shared enthusiasm exists within a destination wishing to establish itself as a 'learning' destination, then the task is made easier. Conversely, if it does not exist, the possibility of achieving this aim is drastically lowered. As the majority of businesses in a tourism destination consist of small businesses and family firms, the tourism destination is presented with somewhat of an 'innovation handicap' (Hjalager (2002: 470), as small enterprises lack the innovation capacity of larger firms and are often beset with difficulties related to resources and time. Saxena (2005: 288) became aware of this while investigating three learning regions in the Peak District National Park: 'The majority of the businesses in the PDNP are micro businesses and family firms, and this cluster of small businesses remains the most difficult to service in terms of general policies intended for development, and in the area of vocational education and training specifically'. In a similar vein, Novelli *et al.* (2006) noted that despite initial enthusiasm to the 'Healthy Lifestyle Tourism Cluster' initiative in the south of England, small firms eventually lost interest due to staff shortages and lack of short-term benefits.

Hjalager (2002: 470) also believes that there is little trust evident in a tourism destination: 'Not even the fact that many destinations are heavily dependent on tourism, and that enterprises could not survive without each other's presence, limits jealousies. Due to freeriding, collaboration is, therefore, mostly the result of intermediation by other organisations, e.g. tourist offices/boards, where activities are undertaken at "arms-length" from the individual proprietors. This offsets some of the potentials of knowledge transfer, of course'. Furthermore, frequent ownership changes in tourism firms serves to further hamper the process of collaboration.

Human capital: This refers to the 'the supply and capability of individuals to contribute to the production and delivery of touristic services and experiences' (Sharpley, 2009: 162). While one of the principal concepts underlining the establishment of a 'learning destination' is the improvement in the stock of human capital, it would, nevertheless, be useful if the destination already has a number of experienced and capable individuals who are able to fulfil the processes necessary to establish a learning destination. The problem with a tourism destination, however, is that firstly the majority of employees are poorly qualified, secondly, there is a high staff turnover due to seasonal fluctuations and, thirdly, traditional careers are not widespread in the tourism industry and, thus, retention is fairly low (Hjalager, 2002).

Environmental capital, or natural capital, is 'core to the tourism product and experience' (Sharpley, 2009: 163). As well as including the climate and the natural landscape, environmental capital also includes the 'built' environment. While this does not directly affect the establishment of a 'learning destination', the destination's environment and its heritage will have affected its historical development as a tourism destination; consequently, stakeholders associated with a destination which has a traditionally strong identity linked to its attractiveness will likely be more agreeable and willing to cooperate with the formation of a learning destination.

Financial capital is required for tourism development. The implementation of a tourism learning destination is expensive and, consequently, much depends on the availability of finance for the destination. As Sharpley (2009: 165) explains: 'This, in turn, is determined by factors such as the availability of finance on domestic markets, government revenues and budget priorities, the potential for international investment and the extent to which the profits from tourism at a destination level are generated by, for example, arrival or departure taxes, sales taxes imposed on tourism-related businesses, import duties on goods utilized by the tourism sector or an overt tourist tax on tourism enterprises'. Therefore, if the destination does not have the public and private financial support that is needed to put into effect the processes necessary to establish a learning destination it will be unable to commence operations.

Political capital: According to Macbeth *et al.* (2004), political capital concerns the use and control of social, human, environmental and financial capital. It is important in tourism in order to 'facilitate the community's 'interaction' with the political process that is essential to tourism planning and development. A community with very low political capital is unlikely to have the will to make a significant input into the decision, let alone the design, of a new tourism development strategy or infrastructure' (Macbeth *et al.*, 2004: 15).

Technological capital: Technological equipment, in the form of computer hardware and software, and the networks which facilitate communication and information sharing, 'enables organizations and businesses to operate more efficiently and quickly in markets, to market or supply their products and services more widely and to provide customers with access to (and a means of paying for) those products and services' (Sharpley: 2009: 166). A destination with insufficient technological capital would be unable to commit to the technocratic approach (see Racherla and Hu, 2009) necessary in the establishment and maintenance of a learning destination.

Therefore, many tourism destinations wishing to establish themselves as a learning destination are compromised by the abundance of small business entities which exist within their particular spheres. This affects the destination's socio-cultural capital, which is an important factor in the implementation and maintenance of a learning destination and is linked with a destination's political capital (Sharpley, 2009) and technological capital (Lee, 2013). There also exist weaknesses in tourism destinations related to human capital; that is, poorly qualified employees and a high turnover of staff result in the situation in which many destinations do not have the human competences required to implement and function as a learning destination. Furthermore, a high percentage of destinations lack the financial resources to attract industry professionals and to build the physical and technological infrastructure which a learning destination demands. Subsequently, destinations which are deficient in social, human, environmental and financial capital are also likely to be deficient in political capital.

Nonetheless, despite the significant obstacles which hinder the implementation of a learning destination, the task is still attainable if the destination provides the correct conditions. The most substantial impediments are socio-cultural capital, human capital, and financial capital and if these are provided, then political capital and technological capital will naturally follow. Recognising the socio-cultural barriers to the learning approach, Hjalager (2002) suggests that knowledge is first channelled, or filtered, into destination businesses by means of what she refers to as the broader institutional, infrastructural and trade system. An investigation into methods of improving a destination's socio-cultural capital, human capital and financial capital are beyond the scope of this thesis, but they represent challenges for future research.

7.4: Future research

It is recommended that further research be undertaken in several areas to augment tourism crisis management in general and also to further refine the conclusions disclosed within this research.

Firstly, in order to add to the broader tourism crisis management literature, it is essential to conduct research which considers: the provision of a universal definition of crisis and disaster; the increase in crises and disasters affecting the tourism industry; the vulnerability of tourism destinations to crises and disasters; the increase in tourism crises and disasters; the negative and positive impacts of crises and disasters; and factors relating to risk perception.

Secondly, research should be undertaken in order to further refine the issues raised in this thesis. These include:

7.4.1: Issues related to the limitations of contemporary theory

Unsuitability of organisational crisis management theory: The homogeneity of the business organisation does not extend to the tourism destination and, consequently, the differing perspectives of tourism destination stakeholders affect a coordinated response. What other features of a tourism destination do not correspond with the concept of the typical business organisation and, on the other hand, which characteristics are shared?

Unpredictability: Contingency plans are often impeded because the type of crisis that arrives does not compare with the imagined scenario and, therefore, it was suggested that scenario planning is ultimately a fruitless exercise. Are there occasions when it *is* feasible to conduct scenario planning?

Limitations of prescriptive models: Prescriptive, linear plans do not correlate with the complex reality of crises and disasters. Whilst the crisis lifecycle is useful as a means of identifying stages of a crisis, this research has shown that it can be unreliable due to the complex pathways frequently undertaken by crises. What causes crises and disasters to often take unexpected turns, thus thwarting response efforts? Can a standardised crisis lifecycle framework, with management strategies devised for each stage, ever be effective or does their management constantly require a more complex, reactive response? This research also revealed that in both case studies there was a fairly lengthy prodromal phase

for the respective tourism authorities to form a response but none was forthcoming. What can be done to galvanise a faster response, even when it appears obvious that there is an impending crisis? It might also be useful to consider whether there are occasions when such plans do have their uses, for example, in relatively uncomplicated situations. Furthermore, while this research suggests the use of plans which are constructed from a complexity theory perspective, it would be useful if researchers continued to test Faulkner (2001) and Ritchie's (2004) frameworks, or at least components of these frameworks.

One-size-fits-all approach: It would be beneficial to investigate the contextual elements of crises and disasters. National culture, destination culture, destination structure and the government's relationship with tourism are inter-connected and, therefore, research concerning one element can often be related to the other elements. For example, it would be interesting to consider the cultural and political reasons why certain destinations appear unable or unwilling to install a crisis culture by structuring the destination to facilitate the spread of knowledge and, ultimately, resilience. Hofstede's (1983) cultural dimensions could be examined in greater detail, in particular uncertainty avoidance, so as to establish why certain 'cultures' are unwilling to pursue a proactive approach. Can such a culture be persuaded to adopt a proactive approach, or are they, in fact, adopting the most practical approach? The relationship between national governments and tourism also bears investigation. How can a government with a blasé attitude towards tourism be persuaded to provide resources for tourism crisis management?

Lack of coordination: Despite the necessity of effective coordination, it is often undone by inter-firm rivalry, competition between tourism organisations, and the fact that the structure of the industry does not facilitate communicative processes. What barriers exist to communication? What methods can be employed to erase such impediments and improve communication? Which communication techniques are most effective?

7.4.2: Issues related to complexity theory based tourism crisis management

Lack of research: In a general sense, the dearth of complexity theory-informed tourism crisis management literature demands a greater response from the researchers and scholars. The following issues need to be considered in more detail:

Complex adaptive system: Further knowledge is necessary relating to the association of a 'complex adaptive system' and the 'tourism system'. This includes research which considers the similarity of the tourism system with natural eco-systems- how can natural self-

organisation processes, which enable the evolution of diverse, individual components, be transferred to a tourism destination to enhance resilience?

In-depth research is also necessary to further explore the properties of a tourism complex adaptive system.

Edge of chaos: A complex adaptive system is at its most innovative, flexible and resilient when situated in the edge of chaos zone. Research is required which refines the concept of the edge of chaos and how its natural occurrence in an ecosystem can be compared to its occurrence in an organisation, or destination setting. It is equally important to investigate methods of 'placing' the destination into the edge-of-chaos, and whether the DMO is the appropriate body for facilitating the transformation. Is the 'learning destination', as suggested in this thesis, the most appropriate method of achieving this aim, or are there superior methods? How can Schianetz *et al*'s (2007) eight elements of shared vision, information, continuous learning, cooperation, cultural exchange, participative planning, coordination and adaptive management be incorporated into a fragmented, competitive destination? What methods can be used to facilitate the collection, storage and distribution of crisis related knowledge and who is responsible for this? Furthermore, research is needed to examine how the edge of chaos state can be consolidated and the patterns of behaviour exhibited by agents acting within the zone. It would help to conduct case studies which illustrate the positive and negative impacts which occur when a learning destination is implemented and which could highlight the inter-connectedness and organisation of the system's agents.

Butterfly effect: Small changes within the tourism system or the environment can result in significant negative or positive changes for the tourism industry, a feature of complex adaptive systems which defies prediction. Therefore, methods to facilitate positive changes within the destination and to counter negative changes are an essential research requirement.

Bifurcation: The 'emergency' phase of a crisis, in which the system may emerge or demise. Research is needed to investigate methods of steering the crisis towards a positive conclusion, which involves facilitating inter-organisational communication measures and media response strategy.

Cosmology: This describes the feelings of vulnerability present among a system's agents during bifurcation. Methods of reducing cosmology episodes, such as a shift in emphasis

from procedural to behavioural knowledge and the development of a 'crisis culture', need to be investigated as it can result in hasty, often regretful decisions.

Self-organisation, emergence and strange attractors: Self-organisation occurs when a tourism system spontaneously reorganises itself following bifurcation to create a novel structure. The process is known as emergence and the force, which is often obscure, enabling this to happen is known as the strange attractor. These elements explain how the tourism system which emerges from bifurcation is often considerably improved from the way it was before. Research is required to further understand these processes and to harness methods which generate emergence. It could focus on how the destination should be structured and organised so as to encourage and assist self-organisation and emergence. Consequently, McMillan's (2002) Fractal Web and Moles-Mole's (2001) model need to be tested in real tourism crisis situations and their components should be considered on an individual basis.

7.4.3: Tourism Capitals

Research is necessary regarding Sharpley's (2012) 'tourism capitals', in particular methods of cultivating and gaining advantage from them:

Socio-cultural capital: What methods can be used to harness the collective will and shared vision which are vital when attempting to implement a learning destination? In particular, how can small tourism enterprises be encouraged to change their individual mind-set, and view themselves as an inter-connected element of the tourism system?

Human Capital: What can be done to improve the quality of human capital in tourism destinations?

Environmental capital: Does environmental capital affect the level of socio-cultural and human capital in a destination?

Financial Capital: What can be done to increase the financial capital of a destination?

Political Capital: What methods can be used to add to and control a destination's human, environmental and financial capital so that it can be channelled as political capital?

Technological Capital: How is technological equipment utilised in a tourism destination? To what extent does technology act as a driving force for innovation in a tourism destination? In what respect is social media changing the face of tourism crisis management?

7.5: Contribution to knowledge

Tourism experts agree that at some point in time, each individual tourism destination will encounter severe disruption in the form of a crisis or a disaster. These incidents provoke severe impacts which can affect the destination's infrastructure, economy and the livelihoods of its community. Despite an increase in academic research, tourism destinations, in general, continue to be unprepared when suddenly faced with this situation. There has been a reluctance to adopt the crisis management strategies proposed in the literature, which may reflect the need for more effective articulation between the academia and the tourism industry (see Sharpley, 2011), or it could be due to the proposed practical limitations of these models and strategies (Speakman and Sharpley, 2012). For a number of years it has been suggested that chaos and complexity may provide insights into tourism crisis management (see Baggio, 2008; Farrell and Twining-Ward, 2005; McKercher, 1999; Paraskevas, 2006; Ritchie, 2004; Russell and Faulkner, 1999; 2004; Stevenson *et al.*, 2009); however, the possibilities which this approach may provide have so far failed to be fully explored in the literature. In fact, only Speakman and Sharpley (2012) have considered destination crisis management from the perspective chaos theory. Consequently, taking into account the negative impacts that crises and disasters continue to inflict upon the tourism industry, it was considered essential that these two largely neglected issues – limitations of current theory and the potential of complexity theory – be explored in detail. Despite several applications of Faulkner's (2001) framework, which has noted drawbacks with respect to its prescriptive format and 'one size fits all' approach, there has been no previous research to specifically investigate the limitations of contemporary theory. The fact that the limitations were manifested in the two case studies calls into question the suitability of these frameworks to cope with the complex reality of a tourism crisis. Consequently, this research has provided a valuable contribution to the literature by identifying and illustrating the weaknesses present in contemporary tourism crisis management theory and highlighting the necessity of a change in approach.

As mentioned, chaos and complexity theory had been suggested as an alternative approach to tourism crisis management by several academics, although research had not been forthcoming. This research has attempted to fill this gap by evaluating two destinations undergoing a tourism crisis for evidence of complexity theory elements. The elements were found to be present in both cases and it was consequently suggested that if the destinations

under study had been operating as learning destinations at the time of their respective crises, incorporating the tenets of complexity theory, then the crisis response would have been improved. Nonetheless, caution is recommended as complexity theory does have a number of theoretical and practical limitations which affect its applicability as an academic framework for exploring tourism crisis management. This is the first research of its kind, one which investigates complexity theory within the environs of two actual tourism crises, and it consequently provides another significant contribution to the field of tourism crisis management in particular and tourism destination management in general.

7.6: Final thoughts

On completing this doctoral thesis and approaching the end of my PhD studies, I can begin to reflect on a journey beset with highs and lows, from the exhilaration that I feel upon making an important contribution to the academic field and society in general, to the quiet panic and despair which accompanied those moments of self-doubt when I felt unsure as to which direction to take, of which avenue to pursue. In an odd way, these moments can be compared with various elements of complexity theory. The uncertainty and hesitance, thankfully short-lived but nevertheless distressing, was like cosmology - feelings of anxiety that I was unprepared to face. Self-organisation was evident in the techniques and procedures which I used to silence the voice of cosmology and continue my progress. In order to do so, I had to discover and place myself within my own 'edge-of-chaos', a state of mind in which I could function at my most innovative and creative. My determination to complete the task, and the belief that I could do so, functioned as a strange attractor, pulling me towards this conclusion. Finally, this conclusion is an example of emergence, the order which has materialised from the 'chaos'. The mystery has been unravelled, and the conclusions represent a form of emergence, the convergence all the components of the thesis into a coherent whole.

It is hoped that this research will provide assistance to academics, practitioners, and other students who are attempting to improve the tourism industry's preparation for crises and disasters. It is also hoped that it will have aroused sufficient interest to act as a catalyst for further research. There are a number of suggestions listed above but the list is by no means exhaustive; this thesis has just touched upon the possibilities that complexity theory offers to the management of tourism. There are many more doors to be opened and pathways to be explored.

As tourism continues to encompass the globe, the plethora of crises and disasters affecting tourist destinations will continue to persist and provoke economic and social hardship for

those that it affects. While nothing can be done to prevent crises and disasters from occurring, those destinations which are operating as 'learning destinations', on the 'edge of chaos', will be prepared to minimise the damage and capitalise on the positive effects. While people naturally long for, and feel comfortable with, harmony, stability and order, the traditional ways to achieve this are becoming increasingly inept in a changing, arguably more complex environment. Complexity science endorses the view that controlled chaos is not to be feared; rather it should be encouraged as it creates the conditions necessary for innovation. This is the message which needs to be conveyed to the tourism industry if tourism crises and disasters are to be, if not conquered, at least diminished.

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